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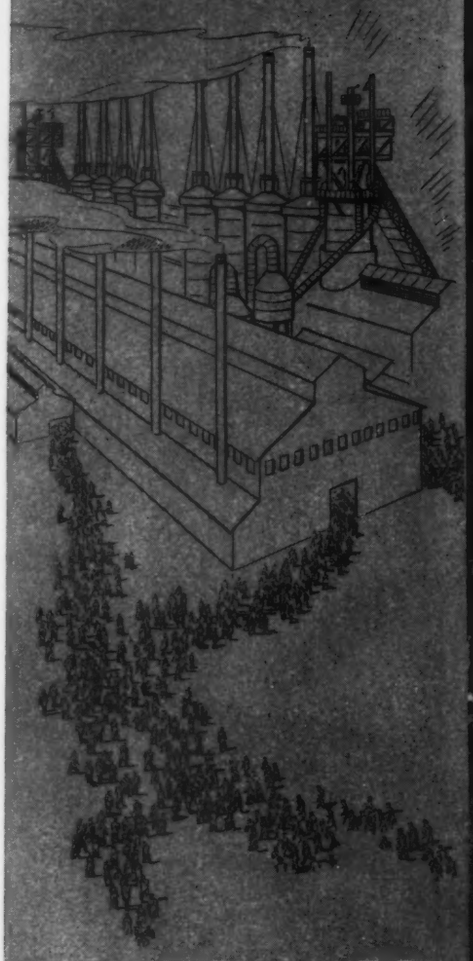

The Man Who is Republic

No bugle wakes him from his morning sleep.

No uniform tells all who see him that he is defending the liberty of America.

No beribboned medal shows his work well done.

But there he is—a typical American—55,000 of him in round numbers—working in Republic plants, mines, offices and warehouses in 35 states—daily doing his share to turn out huge quantities of billets, bars and strips of steel—that every industry may have the sturdy raw material from which to fashion the sinews that will make America safe for his children—and yours.

This is the type of skilled-in-steel worker that mans the far-flung operations of Republic. This is the type of man that during peace-time brings comfort and safety to the American way of life. And this is the type of man who, in this emergency, is giving unstintingly of his effort and his specialized knowledge, to provide America with more and better ***steel—first line of national defense.***

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TEXTILE WORLD

DOUGLAS G. WOOLF, Editor

Pay Your Money—and Take Your Choice

THE TEXTILE INDUSTRY is in the midst of good times. It has better times ahead. The defense program, both in its direct effect upon the industry itself through Government purchases of textiles and through its boosting effect upon the purchasing power of employees of practically all other industries, has created a demand for textiles which will keep the mills busy for as long ahead as anyone dares to look for the moment. Improved prices and manufacturing margins promise that this high rate of activity will be profitable (See page 65).

So far, so good. We wish we could stop there. But there is more to the story. None but those who still believe in Santa Claus will imagine that this defense bill will not have to be paid.

You just can't build up non-productive enterprises without placing a corresponding burden upon existing productive enterprises. You can't spend billions on military and naval preparedness without paying the bill sometime, somehow.

Just what percentage of a soldier, or even how many soldiers, each worker in civilian life will have to carry on his back depends upon how long the emergency lasts. At the moment, it looks as if it will last plenty long. The news of Japan joining the Axis powers extends that probability far more than most of us realize at the moment—or would like to admit.

THERE ARE TWO WAYS in which we can pay the bill.

One is by a period of inflation, such as that of the 1920's, followed by a period of deflation, such as that of the 1930's. Anyone who likes that method can have it. Personally, we know a lot of people who thought they were worth $100,000, or half a million dollars, or a million dollars or more, back in 1929. They don't seem to have it today. Personally, we know far more people who found the security of a life-time dwindling away in the early 1930's. Many of them never again got a foot-hold; many others started life again on an entirely different scale.

The other way is to look ahead *now;* to realize that we have to pay the bill eventually so why not now. In other words, to pay as we go. That means, in essence, that we would have to forego out-of-line profits for capital, and out-of-line wages for workers. It means we would have to buckle our belts a little tighter, and be prepared for a somewhat decreased standard of living. But that decrease would be nothing, compared with the collapse in living standards which we might have to take in the grim 1950's, let us say, after another binge in the 1940's.

In other words, do we want to follow the pattern of the last emergency and its after-effects, or create a new pattern, a little harder at the start, but much less disastrous at the end—and certainly more distinctly American?

To this writer, there is no question as to the choice. Since most of us are far more concerned, fundamentally, about the future of our children than we are about our own well-being, Method No. 2 seems to be the prescribed answer. Certainly we tried the other way—and the children of the "glorious" 1920's inherited the grief of the 1930's. Do we want to start another debauch of the 1940's which the children of this coming decade will have to inherit in the 1950's? The answer is obvious.

FROM A NATIONAL STANDPOINT, this means that the Federal Government will have to stop its expenditures of billions upon non-productive, but vote-getting, projects, and concentrate its appropriations upon (1) defense, and (2) only those functions of Government *essential* to the national welfare.

From the narrower standpoint of the textile industry, it means that textile manufacturers will have to snuff out excessive production-and-price policies before they come into being; and devote their energies to sane management policies of modernization and efficiency. (See our next month's issue, with its special "Textile Modernization for National Defense" Section—Advt.)

It also means that textile employees will have to be satisfied with the gains they have made in the last decade, and not exploit this new emergency for their own ends. This applies, not to the individual workers, but to the organizations who presume to speak for them.

IF WE WERE NOT in a national emergency, this would be just one more editorial. But since we are facing possibly the greatest crisis in our national history, the choice which Government, industry and labor make today, now, will determine whether or not this great American democracy can survive.

If in doubt, ask any Frenchman. He knows.

Douglas G. Woolf

THE EDITOR SAYS

Stop That War!

A few days spent in Washington last month convinced us that the Administration and all its satellites regard us as "in" the war—or practically in it.

That is not the wish of the American people. An overwhelming majority still have no desire to send their sons to slaughter. They have no desire to entice bombing of American cities. They know we may be *forced* into the war (and they are behind all proper defense measures) but they don't want to invite this country into it.

This stand is not incompatible with our national desire to aid Great Britain. In fact, there is good reason to believe that we can best aid her by remaining neutral.

So, how about curbing hysteria—and refraining from placing the stigma of "appeasers" upon the great bulk of the American people who don't want to "appease" but who do want to stay at peace? This is primarily a question of national psychology. Don't let's get into a national war psychosis.

Stop that war!

Textile Minute-Men

The roster of textile men who have done their tour of duty in Washington during the last decade is a long and brilliant one. NRA, AAA, Wage-Hour Law, and now Defense have called these men away from their jobs at great personal sacrifice, and at the expense of their companies who have released then for this public service.

The latest group—those who comprised the textile unit in the National Defense Commission—have returned to their desks. Robert Stevens, Arthur Besse, Charles Sweet, Earle Stall and Henry White have performed a vital job without ballyhoo and without seeking personal credit.

The textile job on the Commission has now fallen to W. Ray Bell, president of the Association of Cotton Textile Merchants of New York, who just recently was released by his association to take up his temporary duties in Washington. His own wide knowledge of the textile markets will be supplemented by that of his predecessors whose advisory service will be available to him.

Worth Street has been particularly cooperative in this period of emergency. Wellington Sears released Charles Sweet and now the association releases the "Mayor of Worth Street."

As we look back over the last ten years, we feel that the textile industry has displayed a high degree of industrial statesmanship by trying to make Government-in-industry work. It has not approved many of the moves—but, once a bill became a law, it had the intelligent cooperation of all textile groups. In the defense program now under way, they have the more hopeful task of making industry-in-Government work.

Their attitude means much to our national security. Only through this type of democratic procedure can we face the trying years ahead.

Painless Annual Conventions

As an ardent believer in, and supporter of, the role of the trade association in industry, this writer was heartened by two annual meetings which he attended last month: those of the Southern Hosiery Manufacturers Association at Asheville and the Southern Combed Yarn Spinners Association at Gastonia.

There was nothing pontifical about those meetings. In each case, the president and secretary reported simply and convincingly the progress made during the year in the interest of their members. In each case, there was well-documented evidence of the value of such group activities to each supporting company. In fact, this observer reached the conclusion that each member could compute his own dues, and then multiply that amount by at least ten in order to realize the value he had received. And if suddenly both organizations ceased to exist, we imagine it would be worth probably 100 times current dues to re-create for each member the contribution which comes from group thinking.

To drop to a minor note, we attended the hosiery meeting two years ago at Asheville. When we got back, we wrote a piece on this page, praising the association's accomplishments but registering a mild complaint about the long narrow meeting-room, where only those fortunate enough to occupy the front rows were able to hear what was going on. This year, we were delighted to find that the meeting was in a well-shaped hall where all except possibly the boys-in-the-back-room could see and hear. The efficient secretary, Taylor Durham, told us that the change had been made last year, and that he had then made a public acknowledgment to the "power of the press."

Drunk with such power, we now suggest that rubber ferrules be placed on the feet of the chairs in the new meeting-room. Their scrapings on the tile floor made hideous sounds which visibly affected the nerves of all in attendance—and we suspect, although of course we don't know, that they brought particular anguish to those with hangovers.

As the advocate of the 20-minute convention-speech and the speechless convention-banquet, we now add one more plank to our platform for American industry: the squeakless convention-chair. When that is accomplished, we shall feel that our mission in life has been fulfilled. Or almost. We still have another hobby: a convention on a boat. Mebbe that's only for bankers. But if textilites ever get cruise-conscious, count us in.

"It Can't Last"

The 20th anniversary of the Carolina Cooperative Council, of Marshall Field & Co., Manufacturing Division, is important not only to that corporation but to the textile industry as a whole, because it proves that this type of key-men organization can become a permanent part of the employer-employee relations of a company. It disproves the cynical belief of many that such a movement is just a fad, which can not last.

The reason the Carolina Cooperative Council has lasted is because it grew out of a mutual desire on the part of both the management and the operating executives to build a sound educational medium, and because it has been carried on during the two intervening decades in a spirit of complete sincerity on both sides.

In our opinion, the real basis of good employer-employee relationships is education—and the experience of the Council bears out that fact.

Luther Hodges, general manager of the Manufacturing Division, has been the guiding spirit behind the Council from the beginning. He must derive great satisfaction from surveying the success achieved during its first two decades.

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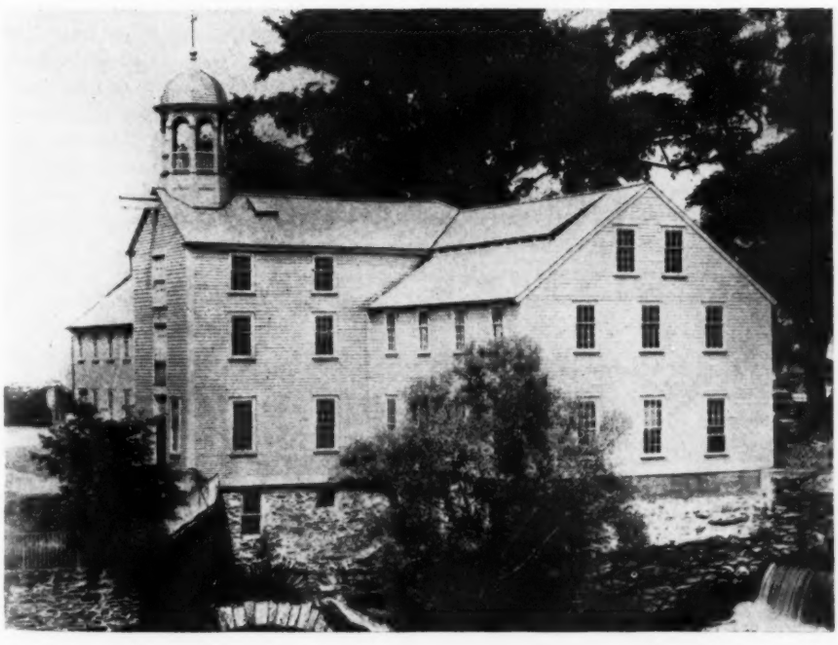
NACM Honors Samuel Slater



JUST 150 YEARS AGO, in a small building which still stands in Pawtucket, Samuel Slater began the manufacture of cotton in what turned out to be the first successful cotton mill in the United States.

To commemorate the event and to honor the memory of Samuel Slater, the National Association of Cotton Manufacturers observed this anniversary with a meeting at the old Slater mill in Pawtucket, Thursday morning, Oct. 10. Joining with the Association were the Old Slater Mill Association and the Rhode Island Textile Association. This session closed the two-day convention of NACM at Providence which will be reported in detail in the next issue of this paper.

On behalf of the NACM and the Rhode Island Textile Association, William B. MacColl, treasurer of Lorraine Mfg. Co., Pawtucket, presented a bronze tablet dedicated to the memory of Samuel Slater. Albert E. Noelte accepted the tablet on behalf of the Old Slater Mill Association of which he is president.

A "Fashionating" State of Flux

How the fabric maker can fit his plans into America's new fashion role

By MARJORIE BELLE CLARK

Editor's Note: Last month Miss Clark explained what this much discussed Paris-to-New York fashion shift is all about. In the accompanying article she brings the story up to date by telling just what has been done about it—and, specifically, where the fabric manufacturer fits into the picture.

★ ★ ★

AMERICA LOVES HER NEW ROLE as "Fashion Center of The World." There's no doubt about it! The current enthusiasm for "going American" in fashions marks the beginning of a new era in our industrial and artistic history. The resourcefulness of our fellow countrymen has been with us since Plymouth Rock and if our new frontier is that of building fashion prestige, that we will do! The one cautionary note being sounded right now is not to overpublicize our activities lest we get fed up with our fashion prestige before we have achieved it.

Here, fashions are created for the democratic middle classes as well as for the rich. Here, inspirational design comes principally from Hollywood and New York. Our country is so large and so resourceful and so well connected by systems of communication, transportation and distribution that from coast to coast everybody is talking about our new-found fashion importance. From the trend of recent events, it would seem that in our effort to assume the responsibilities and privileges of style leadership we have certainly leaped upon the bandwagon in a whale of a hurry.

After all, the artistic traditions which gave Paris and France fashion leadership for many years did not spring up overnight. For that reason, incidentally, they are not likely to forsake France in this, her dark hour.

ONE OF THE FIRST specific effects here of the collapse of Paris as a fashion center was evidenced in last month's openings of the Upper Fifth Avenue shops in New York. Elegant and expensive clothes were "shown" mid formality, champagne, music, photographers and special guests—on a scale never before attempted in this country.

For a "first time" effort, our high-style fashion originators put on an excellent shindig. There have been comments to the effect that the clothes tended to stick too closely to fashion trends established last year by Paris—followed by the cryptic thought that America should inspire fashions which are totally different. However, the clothes shown were elegant and daring.

Another effective action taken by a New York store, Lord & Taylor, had to do with promotion of exclusively designed moderate-priced clothes—something Paris probably never even considered and certainly didn't do. In connection with this move it was pointed out that "originality wears no price tag" and that price snobbery is a deterring force in the evolution of design. This seems to be in keeping with the American economic system and should please the fabric maker who would thereby be assured of a greater volume sale of the exclusive fabric he spends the time and money to create. Should this venture prove to be successful it would upset the fashion cycle apple-cart which—as pointed out in these columns last month—traditionally starts in high-priced, high-styled merchandise, works around to acceptance by few, then many, then everybody—and it's over!

In order for the fashion cycle to work as it has in the past—which, as we have indicated above, it may not continue to do—designers and merchandisers here must have the courage to introduce those seemingly drastic departures from current fashion trends. There is a logical purpose behind those so-called whims of designers—those artistic binges—which appear to be bids for publicity. They are the "new ideas" which feed and nourish fashion. It is things like the "wasp waist" and the "bare midriff" that make us perk up and talk about new fashions—even if we don't wear them. (P. S. There are always compromise clothes which suggest but don't go "whole hog" for a new idea).

American fashion authorities seem to be divided in their points of view on building our fashion prestige. One votes for the traditional system with an experimental laboratory for creative design. The other supports a new trend of thought—that new fashion ideas be sought everywhere. These contrasting opinions were interestingly voiced at a recent luncheon of the Fashion Group.

Among the additional newsworthy items that have appeared recently in the press in connection with the growth of America's fashion center might be mentioned: the promotion of prestige silk dresses by Saks' Fifth Ave.; a study of the distribution of fashions at the Boston Conference on Distribution during the first week of October; a large showing of original resort clothes put on by the Celanese Corp. of America; the opening of a New York salon by Mainbocher—an American who made his reputation in Paris as a couturier; and fashion lectures by another Parisian couturier, Madame Elsa Schiaparelli, who has recently designed clothes to be manufactured in America's garment center.

★ ★ ★

FRONT COVER

The distinguished gown shown on our front cover this month is an original model from Bergdorf Goodman, New York, just launched for the winter 1940-41 season. It is an example of the "sham nudity" type of dress featured this season. Behind this picture are clippings of a few of the many stories on American style from newspapers of the last few weeks. Loft buildings near New York's garment center are the backdrop.

GRANTING THAT AMERICA does have the creative talent and an efficient system of retail distribution, the one most important problem in the fashion scheme of things is that of providing high-style fabrics for the manufacturer-designer and for the exclusive custom-designer.

First, let us look at the designer's side of the picture. She is an artist and regards fabrics as an art medium, just as other artists do clay, paint or stone. She wants new weaves and textures "to inspire me"; patterns, colors

Mayor LaGuardia puts New York's stamp of approval on one of the important fashion openings in that city early last month. He is chatting with a model, while George A. Sloan, New York's Commissioner of Commerce, smiles his approval. Incidentally, Mr. Sloan is chairman of the Mayor's business advisory committee and recently joined in submitting a resolution to the Chamber of Commerce of the State of New York supporting the movement to establish New York City as the fashion center of the world. The resolution was passed by the Chamber.

Karger-Pix

and textures exclusive for the whole United States. She wants to be consulted before and during the development of new fabrics. She wants unusual high-style fabrics with an emphasis on "quality"; more uniform finish and better dyeing of fabrics; attention from the heads of fabric firms; and some protection against copying.

It is fairly clear that these are the demands of the artist—who likes relationships which are personal, who wants a wealth of materials to work with and who thinks first of artistic accomplishment.

Fabric makers, on the other hand, are constantly faced with the more practical problems of price competition and markets. The French fabric maker had as his markets all the major cities of the world; there is no "rest of the world" for American textiles. And as for the pricing matter, there is now a place in this country for high-style fabrics—some of which are not commercially copyable at "cut-rates"—and, since they are going to cost more to produce, we can logically expect them to be more expensive. The American fabric manufacturers point out that expense factors in fabric making must be spread over the yardage produced and that the cost of a fabric goes up in proportion to the limitation of the yardage. If designers of clothes refuse to pay for exclusive, American-made fabrics, the fabric men cannot cooperate by developing them.

A second important consideration in the smooth-functioning of the fashion movement is the matter of time. It takes a certain amount of experimental time to develop a successful fabric and most dress designers refuse to work far enough ahead of season to give the fabric maker time to produce novel and exclusive fabrics. Here, again, the American system differs from the French. As a matter of fact, only last month a few of our custom designers—steeped in French tradition—presented collections here which were made almost entirely from fabrics imported from Europe months ago. Such advance planning would help tremendously in maintaining a flow of high-style fabrics. This would do away, too, with the situation which has existed in the past where the designer did not know enough about the American fabric market to recognize a domestic fabric when she saw it.

THERE MUST BE SOME WAY to bring about a better understanding between fabric and fashion makers. Already each is beginning to know more about the other's problems. What can be done in the way of special effort to produce exclusive fabrics? The yarn producers, for instance, or such organizations as the International Silk Guild, can set up experimental laboratories where new fabrics will be developed to feed the small mills who can't afford the expense, space or time to develop their own. The rayon yarn producers are already doing this. Perhaps a group of non-competitive small mills could hire a fashion coordinator who would bring new ideas and new trends to these "little men" who are geared for limited production and can't afford to toss any of it to the winds.

For years mountain weavers and small producers have needed fashion guidance. This is an opportune moment for some of them to bring their lights out from under the bushel basket. Perhaps refugee craftsmen will work in this country to create the fine fabrics here that they once made in Europe. One thing that is already being started is closer cooperation between the heads of firms, so that fabric stylists and executives will know more about the needs of designers. Museums or industrial groups might subsidize textile experimentation. Small mills might be guided by larger ones. It is possible that the large textile mills will extend their efforts in special departments, the sole function of which would be that of creating new fabrics.

A smooth-working fashion system in this country will not come about overnight; it will take time. As long as we are willing to work out our problems as we go along and proceed gradually, we can build our fashion future on firm ground. If all interested parties work together, share the gamble and plan ahead, we can establish the fashion prestige we seek; we can lead the world in fashion originality. It demands coordination and cooperation between the factions of design, production, distribution and consumption. That's what fashion is—a "fashionating" state of flux, to which every individual in America can contribute.

Army Textile Orders Half Placed

1940 program is at half-way mark —Raw wool deal with Great Britain

McGRAW-HILL WASHINGTON BUREAU

PAUL WOOTON, Chief Correspondent
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BY BLAINE STUBBLEFIELD

ABOUT HALF of the Army's 1940 clothing and equippage program has been placed in orders to manufacturers. The other half will be awarded well within the present year. This rough estimate was made for TEXTILE WORLD by Gen. C. L. Corbin, chief of the Quartermaster Supply Division.

The whole program totals something like $350,000,000. This includes appropriations and authorizations already made and a substantial portion of a clothing and equippage item of $145,000,000 in the third supplementary defense bill, which seemed on its way to the President as this was written.

Of course, the above refers only to the expectation of textile purchases so far as the balance of this calendar year is concerned. It does not include the program which may be put into effect any time in 1941 after the new Congress comes into session. In addition, even the expected purchases for the balance of this year could be increased at any time by action of the present session, if appropriations seemed insufficient to keep up with the outfitting of soldiers as they come into the Service.

Typical of orders that may be expected in the last half of this year's procurement is the award that will be made on bids, opening Oct. 9, on 2,000,000 wool blankets. This is one of the largest peace-time textile purchases ever made. It will require some 8,000,000 lb. of wool of 56s to, but not finer than, 60s grade. The Army expects to pay more than $6, the rate for the 1,200,000 blankets taken in August.

General Corbin tells TEXTILE WORLD that he is well pleased with the way the industry is cooperating. There was some complaint from the industry at first about quick delivery terms of some contracts. But manufacturing periods are being lengthened in many contracts in the remaining half of the present program, so there won't be so much rush—unless some new world event changes the plan.

Deliveries of new clothing will not quite keep up with mobilization of men under the conscript and National Guard acts, the General said. Some old-style overcoats, and breeches left over from the World War, and not quite all used up by CCC, will be worn by recruits this winter. But new stuff will come along before any possible active service that may be necessary.

Photos by U. S. Army Signal Corps

This non-commissioned officer is carrying a full field pack including wool uniform, overcoat, gloves, underwear, sox. With blankets, it takes about 190 pounds of wool in the grease to outfit a soldier

Meanwhile, in meeting the new conditions of war and new production problems, due to technological advances and increased volume, the Philadelphia QM Depot's research office continues to make specification changes.

To supplement Byrd cloth used in wind-resistant jackets, Philadelphia Depot will buy poplins of 5 oz. minimum per square yard, but which may run about 6 oz. The minimum construction is 106x52; breaking strength is 115 lb. for warp; 60 lb. for filling. A permanent water-repellent finish capable of resisting penetration of water to a minimum hydrostatic head is required as a measure of wind resistance. A "permeability" of not less than 65 sec. is required for passage of 500 cc of air at 5 oz. pressure through ¼ in. orifice over which the fabric is clamped.

For lining winter caps, QM is buying a knitted, blanket-finish cloth of 56s to 60s fleece or pulled wool. Weight is 22½ oz. per linear yard of 54-in width. One hundred thousand yards have been taken, and QM is in the market for 71,000 yd. more.

In mosquito netting QM is buying tricot in addition to bobbinet; also buying Nottingham, and Levers is authorized but in general the cost is high and bidders can't get in. Inquiries have been issued lately for marquisette, or cable netting, which is heavier; no awards have been made as yet. In general, marquisette is not so satisfactory after laundering, and mosquito bars have to be washed.

Among recent developments is a new lining for horsehide gloves, instead of the separate seamless circular-knit lining. QM is buying gloves now with a sewn-in lining of flat knit 60s wool, tan color, 7 to 7½ oz. per sq. yd.

EXPERIMENTS WITH NYLON parachutes have been completed, according to observers, and are quite satisfactory. Neither Army nor Navy will say whether or not they will switch from silk to Nylon. The assumption is that silk, for the present, has a slight but unimportant edge on any other cloth. But it is suggested that if the Services are going to depend on Nylon in case silk is shut off, they probably will want to make the change now.

There are few facts and much speculation concerning silk from Japan. It is thought here that the Japanese will not embargo silk to the United States, but the Administration might slap an official boycott on silk imports, in addition to scrap iron and oil embargoes on Japan. Some think a boycott move on the part of citizen groups possible. Army and Navy do not say how much reserve silk they have in stock. Department of Commerce and other officials said that Nylon production, if partly diverted from hosiery, might well be sufficient for all the parachutes that will be needed. They estimated 1940 Nylon yarn output at 4,000,000 lb. One million pounds of Nylon at 10 lb. per parachute, would make 100,000 units. Silk is regarded as critical for no other product, except cartridge bags for big guns, which require a very small volume of goods. Substitutes are on the way for these bags, too.

STORAGE OF TWO OR THREE million pounds of British Empire wool in the United States is regarded in Washington as a bargain for both parties. At this writing the final details were being worked out between the Defense Commission and London.

Chief advantages to the United States are that the stored wool can be purchased from the British at any time it is needed; that it will be here (probably much of it in Boston) instead of in Australia or New Zealand, from which it would be risked in transit through any spread of sea warfare; in effect we acquire a substantial volume of wool against possible large-scale Army mobilization, without dislocating domestic production and markets to an appreciable extent; and we invest little or no money in this reserve which may lie idle for a short or long time. In fact, under the arrangement, our wool stockpile is the only one, among several strategic materials being laid in, that is not costing cash.

For England, wool stored here will be halfway home from "down under," and past the risks of war that may develop in the Pacific; it will be clear of Nazi bombing of the British Isles; in case the Bradford and other woolen mill sections were extensively damaged, and Britain should have to call on this country for some spinning, the wool will be here, ready for use; apparently, too, the storage will be rent free to England. It is understood the British wanted the U. S. to pay the excess freight from Australia; the outcome of this could not be learned.

Some of the wool, estimated by one authority at 250,000,000 lb., will come directly to eastern ports by water, and some will be landed on the Pacific Coast and transferred to rail. Presumably there will be some attempt to store the fiber at points most convenient to mills. The total amount figures about 40 shiploads. This is the biggest volume of wool ever shipped to this country in a season from Britain's South Pacific possessions. Value is estimated at $75,000,000.

Naturally, the wool growers took notice of this huge volume of stock to be lodged in this country, fearing that it might be released on the domestic market. They were assured, allegedly, that under the agreement none of the wool could be used in the United States except in case of emergency. According to Army procurement officers, there is plenty of domestic wool for the contemplated army of 1,200,000 National Guardsmen, Reservists, volunteers and selectees under conscription. Beyond that, one can fairly assume we would be over the hill into a state of "emergency." It is said that the Army proposed the wool negotiation.

Of course the United States is not wholly dependent on Britain for import wool. Wool men about town, and undoubtedly the Defense Commission, are talking about a deal for Argentine and other South American production. This would seem to be a good idea, because those countries' European markets have largely disappeared in the smoke.

This is the Army's new dungaree. Work clothes are more important than ever in the Army, because there's more machinery: trucks, tanks, motorized artillery, airplanes —and more maintenance work

RECENT MAJOR ARMY AWARDS

(Since Aug. 20)	Yd.
Overcoating, OD, 32 oz	1,500,000
Cloth, serge, OD, 18 oz	3,040,000
Cloth, serge, OD, 18 oz., light shade	1,500,000
Shirting, flannel, OD, 10½ oz	1,800,000
Cloth, lining, wool, OD	100,000
Netting, Tricot, 35"	[1]415,000
Netting, Tricot, 81"	[1]289,005
Duck, cotton, 15.5 oz	[3]10,000,000
Duck, cotton, 9.85 oz	[3]660,000
Duck, cotton, 7.9 oz., 33" (tent)	[3]2,128,125
Duck, cotton, 15.5 oz. (tent)	[4]2,557,534
Drill, cotton, unbleached, 35"	3,218,316
Bids opened Oct. 2	Sq. Yd.
Cloth, cotton, khaki, 8.2 oz	16,000,000
Bids opened Oct. 4	Yd.
Cotton, OD, overcoat lining	2,396,373
Collar stiffening, white	228,583
Drill, cotton, bleached, 35"	8,632,972
Lining for uniforms, OD	1,565,410
Bids opened Oct. 9	
Blankets, wool	2,000,000

1. Bids on 1,602,000 yd. of 35-in. net were opened Sept. 6, but awards were reduced because of excessive price. Small offers of bobbinette were received but widths could not be balanced in manufacturing. The balance of netting wanted was readvertised and bids were due to be opened as this was written.

2. These awards were made but the exact figures had not been cleared.

3. 3,360,000 yd. were called for but the offering fell short.

4. 0,400,000 yd. were called for but the offering fell short.

THOUGH ARMY AND NAVY strongly opposed the move, Sidney Hillman, labor head of the Defense Commission, told 60 press correspondents on Oct. 1 that both Services had ordered negotiated procurement of most garment supplies, effective that day. Manufacturers have their choice of selling either by bidding or by negotiation. But bids will not be opened publicly; low bidders must negotiate too. This means that the bidding system, as such, is off for the cutting and sewing industry. Mr. Hillman expressed the hope that textiles also may be brought under the negotiation system. Opinion here is that they will be. Army and Navy agreed to make the change in accordance with the Defense Commission's 12 principles of defense procurement, which were approved by the President. One objective is to spread the orders and increase potential capacity of the industry. But emphasized is the provision, to be in all contracts, that all labor laws must be complied with.

Textile Preparedness

Discussed by Army, Navy, and Air Corps experts at meeting of technologists

TEXTILE USED by United States land, sea, and air forces, problems which arise in the course of their procurement, and research work which has been carried out in developing domestic substitutes for materials of foreign origin, were discussed by Army, Navy, and Air Corps experts at a meeting held in New York on Oct. 1, under auspices of the American Association of Textile Technologists. Over 350 men and women prominent in the industry attended the meeting. Fuller E. Callaway, Jr., president, Callaway Mills, was chairman; he was introduced by Carl C. Mattmann, president of the technologists' group.

REGIMENTATION of Army Clothing was discussed by Arthur Besse, president, National Association of Wool Manufacturers. Mr. Besse said, in part:

"The Army knows what it wants and has educated the textile industry to a point where it understands requirements and is able to fulfill them with a reasonable degree of satisfaction. Many mills feel the Government is too particular, especially in the matter of shade. This uniformity is highly desirable from the Government standpoint and means a real saving in costs, especially when the material is sent to outside contractors for fabrication.

"There are many who criticize the Army specifications for textile fabrics, especially the wool items. The Army has adopted these specifications after many tests and a considerable amount of experience in the field. The standards have not been hurriedly or carelessly adopted. The standards and specifications have been developed under the direction of men with technical textile training. Fabrics purchased for our military requirements are superior to those used by any other country in the world. Although the grades of wool specified are high, the specifications call for various grades in proportion to the total production of all wools in the United States. This seems intelligent, since in time of emergency we might have to rely to a large extent upon domestic production of wool.

"As the amount of textiles purchased by the Government increases, an increase of technical personnel at the mill end is called for. Where mills have large Government orders a properly qualified man, whose sole assignment is to keep the production up to Government standard, can save many times his salary by preventing excessive rejections. Army specifications do not allow much variation and a man who would keep in constant touch with the Quartermaster's department and translate Army requirements into terms of mill procedure, should prove invaluable. Undoubtedly some mills have detailed men exclusively to this work, but it would appear that other mills would do well to consider such a procedure.

"Those who count on the fact that the increased quantity of fabrics which the Quartermaster Depots are having to handle will make inspection more lenient are doomed to disappointment. Inspection of Army textiles, although severe, is intelligent. The Philadelphia Depot has a testing laboratory with modern, up-to-date heat and humidity controls, and all necessary equipment to test samples for compliance with specifications. They are trying to take the guess out of textiles to the greatest extent possible.

"This touches on the problem of sealed bids versus negotiated contracts. Much has been said on this subject of late. The usual method of sealed bids is not practicable in the purchase of new, complicated equipment which necessitates the inclusion of many special component parts, the cost of which cannot be accurately ascertained between the time of the invitation and the opening of the bids. But where a military item closely approximates a regular commercial product, there is no valid reason for not continuing the bid system.

"From the standpoint of textiles, the Army is doing a splendid procurement job. A careful survey of mill equipment has been made. Calculations of what can be turned out on a single loom in a single month form the basis of figuring the possible output which can reasonably be expected. Such calculations cover every single textile item and are in turn translated into terms of yards needed to produce the finished articles needed by the military establishment.

"What they do not know, of course, is the extent to which current civilian production may have tied up productive machinery upon which the Government might be relying. This is why they should keep in close touch with associations representing the various industries concerned."

CLOTHING THE ARMY was the subject of a paper by Capt. Albert Dennis, of the Philadelphia Quartermaster Depot. Capt. Dennis' paper read, in part:

"The program of putting coats, pants, and overcoats on our soldiers is enormous both as to the number of items and as to the intricacies of planning. The Philadelphia Quartermaster Depot is charged specifically with the active procurement of garments, and certain items of equipment whose major component is produced by the textile industry.

"The textile phase of national defense must be viewed from three angles: (1) the soldier as the wearer; (2) the Quartermaster Corps as the procuring

SWELL JOB!

THE AMERICAN ASSOCIATION OF TEXTILE TECHNOLOGISTS did a swell job in arranging its meeting on "Textile Preparedness for National Defense." It got together a fine group of speakers and a representative textile audience.

In our July issue, we stated: "The first step should be a mass meeting of all groups in the textile industry, sponsored by their associations, at which all initiative and energy would be pooled in a common cause: the defense of this country so far as this industry can contribute to that defense. This is a 'must' job."

The first step has been taken. The technique of the problem has been explored at the Technologists' meeting. There is still a need for a mass meeting of all groups to explore the management and industrial-relations problems involved in the defense program, so far as the textile industry is concerned. The initiative toward such a meeting could well be taken by the National Council of Textile Industries. The technologists should be included in such a program, as a sort of return engagement. This would complement the meeting already held by that group.

Meanwhile, the thanks of the industry are due the A. A. T. T. for its initiative and enterprise. The technologists once again register their importance as one of the key groups of the American Textile industry.

—Editor

agency; (3) the industry as the supplier. In the course of the adoption of a garment, consideration is given to suggestions made by industry; to the desires of the using branches of the Army; to the factual background developed through research; to experience gained through actual manufacture in government factories; to the accumulated knowledge of clothing and textile designers within the War Department; and to facts demonstrated in service tests of limited numbers of garments. In addition, there is studied and evaluated the availability of raw materials; extent and distribution of machinery; relationship of most suitable component for the garment to related fabrics procured for other purposes; and suitable substitutes which may be present in the markets.

"A quick perusal of specifications for woolen fabrics will show that the load has been distributed upon woolen and worsted facilities in approximately the proportion that each of this machinery bears to the other.

"Constant study is being directed to revision of specifications to allow use of suitable fabrics with high productive rates. Effort is being made to develop substitute fabrics both as to raw materials, basic construction, grades, and colors.

"Rayon and other synthetics appear to have a considerable future in the military field. Experiments are being conducted to determine whether practical military fabrics can be made with mixtures of wool and synthetic fibers. One of the tests now under way is to determine whether, in napping blankets, the wool or rayon component of the yarn will tend to seek the surface. The great field for synthetics still seems to be in filling civilian needs, thus freeing wool for military use.

"Industry can render a great service to the Army by the furnishing of factual data to our research staff as information is obtained concerning the methods, limitations, and physical characteristics of fabrics made from mixtures of wool and synthetic fibers."

TEXTILES IN AERONAUTICS were discussed by Chas. J. Cleary, Material Division, Wright Field, whose talk included the following:

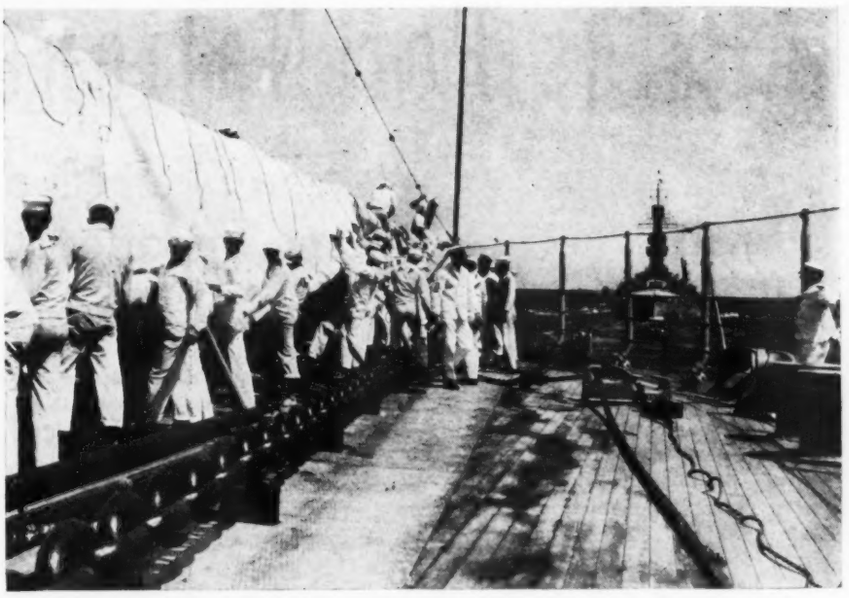
"Current major uses of cotton include wing coverings, tow targets, paulins, balloon cloths, mechanics' overalls, tire and hose carcasses; and webbings, tapes, and cordages of all types. Linen is used for parachute harnesses, parachute reinforcing tapes, bomb slings, and some types of lacing and sewing cordage. Wool has application to flying clothing, pressed felts for buffers, and as interior trim in some types of aircraft. Silk is used chiefly in the construction of parachute canopies, tapes, webbings, cordage, and sewing threads.

"Standard parachute harness webbings have been made of linen; consequently, development of suitable nonstrategic materials was necessary. Cotton and Nylon webbings were developed as substitutes.

"Standard cordage is constructed of high-grade thrown silk; consequently, the development of a suitable nonstrategic substitute was necessary. Several apparently suitable materials are now being tested.

"Parachute fabrics also required development of suitable substitutes. This began with development of Lilienfeld viscose about 1931, followed closely by a cotton substitute, then by a Tenasco cloth about 1938, and immediately thereafter by a Nylon fabric. Spun silk has also been used with sufficient success to justify its use if necessary, and Fortisan is also a suitable substitute, when and if it becomes commercially available. Vinyon is now being investigated.

"The thickness of standard fabric used in parachutes varies between 0.0035 and 0.0040 in. Any thicker gage will interfere with substitution of other fabrics in standard parachute packs. A reasonable maximum thickness for experimental fabric for use in standard packs is 0.0045 in."



THESE SAILORS, clad in bleached drill uniforms, are hoisting a canvas awning over the deck of a battleship

NAVAL UNIFORMS and the textiles they contain were described by Lieut. Lawrence Smith, Naval Clothing Depot, Brooklyn, N. Y. In part, Mr. Smith said:

"The Naval Service uses woolen yarns for 95% of its fabrics, in preference to worsteds. The characteristic woolen fabric is more adaptable to the different stowage and cleaning problems encountered aboard ship. The difference in cost further justifies use of woolens over worsteds. In order to obtain the utmost in serviceability and appearance, the wool used in our fabrics is required to be free from vegetable matter, reworked wools, waste, or any other adulterants. Wools are stock dyed, bottomed with alizarine and a chrome mordant, and then dyed with indigo. Matching of the standard sample is vital. When sailors line up for inspection, any slight deviation of color or shade immediately becomes distinguishable even to the inexperienced eye.

"Various types of dyes and combinations of alizarine and chrome mordants have been tried, but none has been as resistant to the elements and to service use as the present standard. The Navy appreciates the difficulties in handling indigo, with its properties of staining and penetrating; but, until dyes are available which are comparable in all respects with indigo, will continue to require its use.

"The heaviest woolen fabric used by the Navy is for the overcoat, more generally known to the enlisted man as a 'pea-coat.' It is a 30-oz. kersey, dark blue, made from fleece wool of a grade not lower than 60s with sufficient staple length to meet specification requirements. The second woolen fabric to be considered is a 16-oz. melton, dark blue, used for trousers, dress jumpers, and cap. Fleece wool not lower in grade

(*Continued on page* 130)

Fabrics For National Defense

Woolen blankets and lining cloth are among important Army requirements

KEEPING SOLDIERS WARM at night is big business with Uncle Sam. Already, for that purpose, the Army has ordered 3,250,000 woolen blankets. These Army blankets are to be all wool and olive drab in color. Two sizes are required, 66x84 in., 3¾ lb.; and 66x90 in., 4 lb. They are covered by U. S. Army specification No. 8-111, and amendments thereto. Essential data from the specification follows:

Stock—Fleece or pulled wool, of a blend not lower than 56s to 60s grade.

Yarns—Both warp and filling spun on woolen system. [Although not stated in the specification, use of 2.7 typp (9 cut, 1⅔ run) warp yarn and 2.1 typp (7 cut, 1⅓ run) filling yarn will yield a fabric of approximately correct weight. Use of 2.4 typp (8 cut, 1½ run) yarns for both warp and filling will produce a cloth of similar weight.]

Color—Olive drab, produced by blending olive and white wools.

Fastness—Fabrics must show good fastness to weather and to laundering.

Minimum Physical Requirements—Finished width, 66 in.; reed width, 82 in. Length, per blanket, 84 and 90 in. Weight, per blanket, 3¾ and 4 lb. Ends and picks, finished, 28x30. [Although not stated in the specification, 1,804 warp ends, reeded 2 ends per dent in an 11 dent reed; and 28 picks per in. at the loom, will yield approximately correct finished counts.] Breaking strength, finished fabric, 1x1x3 grab method, warp and filling, 50 lb.; after fulling, but before napping, 65 lb. warp, 80 lb. filling. Weave $\frac{2}{2}$ broken twill, two ends to right and two ends to left.

Finish—Fabric must be napped on both sides equal to standard sample; napped fibers must offer considerable resistance to lifting with a needle. Napping may be started wet or dry; use of single-acting napping machine not permissible. Ends of blankets must be overlock-stitched. Each blanket must have 2x3 in. label, containing certain specified information. Letters "U. S." must be stamped or printed in center of each blanket; stamping formula must use potassium permangenate and ammonia; printing formula must yield imprint of equal fasteners.

No. 3 of a series designed to help textile manufacturers in production of fabrics required for national defense. Article No. 1 appeared in August, discussed 18-oz. worsted serge, sleeveless summer undershirts, experimental rayon-wool shirtings; article No. 2, in our September issue, dealt with 8.2 oz. cotton uniform twill and 8.5 oz. cotton herringbone twill.

★ ★ ★

NEW among specifications is one covering knitted wool cloth to be used for lining Army caps. 100,000 yd. have been ordered, and the Army wants 71,000 yd. more. This specification, which is still tentative, calls for a 22½ oz. fabric, 54 in. wide. A digest of data contained in the specification follows:

Stock—Fleece or pulled wool, not lower than 56s grade.

Yarn—Spun on woolen system. [Although not stated in the specification, yarn of approximately 5.6 typp (18⅔ cut, 3½ run) will yield a fabric of correct weight.]

Color—Olive drab, produced by blending olive with white wool.

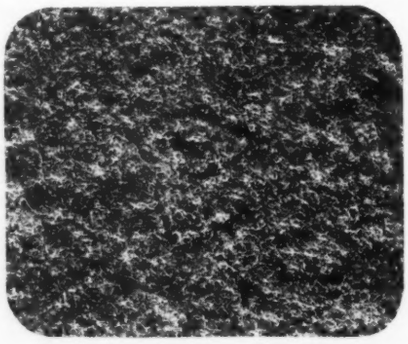


Fig. 2—Knitted woolen fabric used for lining Army caps.

Fastness—Fabrics must show good fastness to weather.

Minimum Physical Requirements—Width, finished, 54 in. Weight, linear yard of 54 in., 22.5 oz. [Although not stated in the specification, use of 14-gage, 30-in., spring-needle machines will produce this fabric. Machine set-up is one end backing, one end face. Backing wheels are blocked 1 and 1.]

Breaking strength, 1x1x3 grab method, lengthwise, 50 lb.; widthwise, 40 lb.

Finish—Fabric must be napped on both sides equal to standard sample. Napping may be started either wet or dry. Use of single-acting napper limited to breaker operation. Shrinkage in sponging must not exceed 5% lengthwise; fabric must not shrink to less than 54 in., widthwise.

Length—Pieces not less than 50 yd., put up full width on rolls.

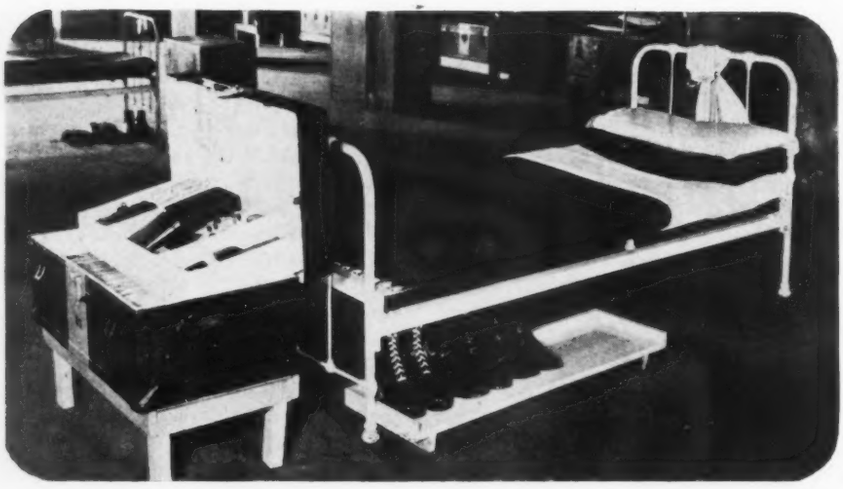


Fig. 1—All-wool blanket in place on soldier's bed in Army barracks

Textiles Boom, But With Restraint

Second consecutive year of record activity; industry expecting hard way out

THE TEXTILE INDUSTRY is in the midst of the most restrained boom which this observer has ever witnessed. TEXTILE WORLD'S index of textile mill activity for the first eight months of this year registered a rate of 134 (on the basis of 1923–25 as 100). This compares with the rate of 132 for the calendar year 1939, a record year incidentally. That 1940, when completed, will equal that record is now a fairly safe bet, despite the high rate of activity in the last five months of last year which this year will have to match. So far as the first eight months were concerned, the activity index during that part of 1940 was 6% above the corresponding portion of 1939.

In other words, the industry is now in the last quarter of the second of two consecutive years of record output. In addition, it is safe to predict that at least the first half of 1941—as long a period ahead as this analyst cares to take in his stride—will be featured by the current rate of textile activity, or better.

A relatively small percentage of this activity stems directly from textile purchases for national defense. A much larger percentage is due to the lifting of the general level of purchasing power created by defense purchases as a whole. A still larger percentage can be traced to the business boom which was latent at the depths of the depression; which found artificial stimuli and expression in the NRA and AAA years; which touched a temporary high level in 1937, only to succumb to the abortive influence of speculative excesses; which was ready to go again at the first of 1939 if it had not been for the shadow of Hitler; which sky-rocketed at the start of the war in September, 1939; and which now again is responding to the impetus of the defense program and its ramifications.

And yet there is current none of the hysteria which characterized any of the above-mentioned spurts. In the textile industry, particularly, the boom is a sober one. Production and price policies are not out of hand, or even straining at the leash. There is an air of stability about the boom which augurs well for future trends.

This writer finds it easy to rationalize and, he hopes, to explain this restraint. It is due, in his opinion, to the sobering realization that no Golden Era lies ahead; that a world at war, with a good part of the civilized world actually at the mercy of the dictators, is not an attractive gamble; and that our own defense program may be only the prelude to our own fight for continuance as a free country; and that, war or no war, we shall have to spend more and more of our national income on non-productive enterprises.

These realizations are not defeatist in character, but they certainly are restraining—and fortunately so. Because it must have become apparent to all businessmen by now that the way out of the economic chaos of the last 11 years cannot be found through sudden spurts. The way out is the hard way. It may be harder than we imagine even today, in a world suffering from as many maladjustments as there are nations, but at least it can eventually be made a way out.

TEXTILE WORLD'S Textile Mill Activity Index

1923–25 average = 100

1929	115
1930	89
1931	93
1932	83
1933	104
1934	90
1935	105
1936	124
1937	125
1938	103
1939	132
1940 (*estimated*)	132

TO COME DOWN to more concrete facts, here are the high-lights of last month's developments, as noted by TEXTILE WORLD'S editors:

Cotton goods experienced an upturn during September and exhibited maintained strength at the end of the month. Worth Street feels future trend is toward further strength, with slight chance for any consequential reactions. Our southern editor reports that mill men in that section anticipate several months of good business. Cotton consumption for first eight months of 1940 was 8% over that for same period last year.

Wool goods sentiment turned definitely for the better. Army business makes some mills independent of civilian orders. Pinch in wool tops sent prices upward, but fabric mills made only conservative advances. Trade expects continued activity for many months ahead.

Rayons have been steady, with converters encouraged by lengthening of terms by greige mills from 30 to 60 days. Yarns are well sold and stocks are declining. Consumption of rayon filament yarns for first eight months of 1940 was 11% over corresponding period of 1939.

Raw silk is deeply involved in international situation. Strained relations with Japan would doubtless cut the supply and the market is consequently stronger with numerous users covering. Prices up to end of September had merely hardened and not increased much on this side. From Japan comes talk of embargoing silk exports to U. S., while from Washington emerges rumor of possible embargo on silk imports. Through this smoke screen is further talk of consumer boycott of silk products here if Japan takes any offensive—so all in all the situation is uncertain and too full of ifs to forecast. Silk deliveries to American mills during first eight months of 1940 was 27% below that for the corresponding period of 1939.

Knit goods: Hosiery situation is divided, with half-hose mills benefiting from Government business, and full-fashioned mills uncertain due to buyer caution. Full-fashioned deliveries by mills in August were highest on record for that particular month. . . Underwear trade has been definitely brightened by war orders plus fair civilian trade. . . . Outerwear trend is steady.

Finishing: Finishers are busier than they have been for some time. Machinery manufacturers are also finding improved business, particularly for equipment of special types.

Wool Labeling Passed

"Virgin" dropped from definitions—FTC to administer—Effective in nine months

AFTER YEARS of pro and con arguments, which certainly need no repetition, Congress passed and sent to the President the wool growers' wool labeling bill. At time of closing for press it had not been reported as signed by the President.

This act defines "wool" as a fiber (from sheep, Angora or Cashmere goat, etc.) that has never been reclaimed from a woven or felted product. It makes misbranding, under the provisions laid down, unlawful. Wool products, meaning any thing or part thereof containing or purporting to contain new or used wool, must carry tags or labels. Percentage of wool, reprocessed wool, and reused wool, and any and all other fibers, each in excess of 5%, must be shown. Any loading material must be revealed. Names of the manufacturer or of persons subject to the law must be shown.

Information other than that required by law may be added to the tag. Labels are not required on linings, paddings, facings, etc., but the wool content of these parts may not be misrepresented. The Act is to be administered by the Federal Trade Commission, which, after hearings, may announce the classes of articles concerning which representations are usually made. Tags must go on wool products all the way from loom to consumer. Regular trade practice procedure of the FTC will be followed in handling the details.

The wool goods trade seems more reconciled to the passage of this bill than would have been thought likely some months ago. Omission of the much fought-over "virgin wool" definition renders compliance simpler for the worsted manufacturer, although "reprocessed" and "reused" hold many difficulties for the woolen man. The definition of "wool" includes all self waste; "reprocessed wool" means fiber recovered from new rags, never "utilized in any way by the ultimate consumer"; "reused wool" means fiber recovered from old rags "after having been used in any way by the ultimate consumer." The problem on garnetted stock made of mixed new and old rags, after carbonization, will be a puzzle for any mathematician, since the garnetter is not usually aware of exact percentages of vegetable matter in the two classes of rags.

One authority points out a curious situation in reference to Army overcoating in which 35% of reworked wool or noils is permitted by Army specifications. If such overcoatings should come into commercial channels, the fabric in which noils have been used would be described as "wool"; whereas the fabric in which reworked material had been used would have to be described as 65% wool, 10% reprocessed wool, 25% reused wool, or whatever percentages of the latter two types were included.

Students of the labeling problem point out that one cannot tell from any laboratory tests precisely what per cent of "reprocessed" wool or "reused" wool appears in any given fabric. They go on to argue if the distinction cannot be told in the laboratory, of what possible use is the differentiation to the public, and what possible chance is there for enforcement of such labeling.

By the bill Congress seems to have taken the term "wool" out of the common vocabulary and given it a peculiar meaning when applied to particular cloths. Congress has thus left no generic term for the industry to use legitimately. A retailer cannot advertise a sale of "wool" goods unless the goods happen to meet the definition in the act. Similarly, a mill agent, a jobber, or a catalog house, cannot include lines of woolens under the general classification of "wool" goods unless those woolens happen to be the very small yardage made without the use of reworked wool.

THE LABELING SITUATION promises to be a bit complex since it provides that the labeling applies not only to any product or any portion of a product which contains wool, but also to such items as "purport to contain, or in any way are represented as containing wool, reprocessed wool or reused wool." The retailer will have a problem on his hands and David R. Craig of the American Retail Federation was recently quoted as saying that he had never met a retailer who wished the bill to be passed.

Who will furnish the labels is one of the questions which will be whipped out by trade negotiation during the nine months which ensue before the act becomes effective. It seems logical that the mill should merely label its product in accordance with law, and let the clothier or the distributor make labels of his own, meeting his legal responsibilities. However, it is certain that great pressure will be brought upon the mill to supply labels for clothiers. If mills do so, it is certain that they will become more deeply involved in the legal aspects of the law than is necessary, and, perhaps more important still, mill names will become a football in retail circles. The description plus the mill name would identify the fabric, and the selling of a garment from that fabric at $22.50 in one house would make it pretty difficult for another house, even with vastly better tailoring, to sell the same fabric in a garment for $35 or $45.

The bill has been described in Washington as the "Wool Growers Wool Labeling Bill" since the wool growers group seems to be the most important group which consistently has supported it and its predecessors. When in Washington the wool growers describe the bill as one to protect the public; in their own transactions and conferences, it is described as a bill to raise the price of wool. Those in the wool goods industry who are critical of the situation, point out that a recent publication of the Department of Agriculture, giving parities of a number of farm products, lists wool as now selling at 118% of parity, and topping the list. Lambs are quoted as 101% of parity, flaxseed as 63%, and cotton as 59%.

The last paragraph in the bill specifically excepts from the provisions of the bill "any carpets, rugs, mats, or upholsteries." The bill covers all other spun, woven, knitted, or felted products. It specifically includes under its provisions imported goods, and specifically releases from its provisions goods for export from the United States when such goods are branded in accordance with the specification of the purchaser or with the laws of the country to which they are exported.

The Federal Trade Commission is given wide powers in the enforcement of the act not only under its own procedure as set forth in the Federal Trade Commission Act, but it is further authorized "to make such further rules and regulations under and in pursuance of the terms of this act as may be necessary and proper for administration and enforcement." Records must be maintained by a wool product manufacturer showing fiber content of all wool products made by him, and they must be preserved for at least three years. The bill provides for fines, for cease-and-desist orders, for injunctions, and for criminal action.

Cramer Heads Combed Yarn Group

Annual meeting hears thrilling progress report, and address by Paul Wooton

THE LARGEST ANNUAL MEETING in the history of the Southern Combed Yarn Spinners Association, held at Gastonia, N. C., Sept. 10, elected Stuart W. Cramer, Jr., president succeeding J. H. Lineberger; received a thrilling report of progress from its executive secretary, Mildred G. Barnwell; and listened to an inside chat on Washington by Paul Wooton, chief of the Washington Bureau of McGraw-Hill Publishing Co., and president of the National Conference of Business Paper Editors. The members also ate lunch.

The effectiveness of a closely-knit group of this type was revealed in the brief introductory remarks made by Mr. Lineberger, and in the graphic picture supplied by Mrs. Barnwell. Its future potentialities were revealed in the acceptance speech of Mr. Cramer.

Mrs. Barnwell said it with pictures. With a series of large animated cartoons she graphically illustrated the major jobs accomplished during the year. Among these jobs were the distribution of "Faces We See," the public relations book developed by the association; cooperation with the Junior Chamber of Commerce in their Annual Cotton Festival; participation in important legislative conferences, and in meetings on yarn rules and on standards for hosiery yarn; cooperation in revision of the cotton section of the Encyclopædia Britannica; participation in the meetings of editors in Washington; and conduct of vital statistical work. In connection with the latter, it was pointed out that the combed yarn industry's statistical situation has never been better than in the last 12 months and is excellent today.

Stuart W. Cramer, Jr., elected president of Southern Combed Yarn Spinners Assn.

MR. WOOTON, in his address, made it clear that he was not expressing his personal opinion (which he characterized "the most unimportant thing in Washington") but rather the best opinions he has been able to get from the leaders in the Government and from representatives of other Governments.

Most of his remarks dwelt, naturally, upon the war and the Defense Program. The net impression he left was one of hopefulness—certainly not one of defeatism—so far as the British crisis is concerned. He feels optimistic, also, regarding the progress of our National Defense Program.

On the political outlook, Mr. Wooton stated bluntly that most observers in Washington were agreed that if the election were to take place at the time he was speaking, President Roosevelt would undoubtedly be re-elected. However, he also indicated the many events which might occur between then and Election Day to affect the result.

THE FOLLOWING OFFICERS for 1940-41 were elected: President, S. W. Cramer, Jr., Cramerton Mills; vice-president, S. M. Butler, Carlton Yarn Mills; 2nd vice-president, W. L. Balthis, Peerless Spinning Corp. and Balston Yarn Mills, Inc.; treasurer, T. L. Wilson, Ruby Cotton Mills; executive secretary, Mildred G. Barnwell; chairman of executive committee, J. H. Lineberger.

AT SPEAKERS TABLE AT COMBED YARN MEETING: Left to right, Mildred G. Barnwell, executive secretary of the association; Paul Wooton, McGraw-Hill Publishing Co., Inc., principal speaker; J. H. Lineberger, retiring president of the association; Douglas G. Woolf, editor, TEXTILE WORLD; E. N. Brower, chairman of the Carded Yarn Group. The profile directly in front of President Lineberger is that of Hunter Marshall, secretary of the North Carolina Cotton Manufacturers Association

Carded Yarn Men Elect

Annual meeting is addressed by Dr. Murchison who sees textile up-trend

WITH THE LARGEST representation of the carded yarn industry in attendance in the history of the Carded Yarn Group, that section of the industry held its annual meeting at the Charlotte (N.C.) Hotel, Tuesday, Sept. 17. The principal speaker was Dr. C. T. Murchison, president of the Cotton-Textile Institute, Inc., whose theme was that the cotton textile business is definitely on the uptrend.

Dr. Murchison pointed out that inventories of textile goods are low and that increases are predicted in purchasing power and in retail sales, and he felt that these two factors will make better business for textile men. He said that the passage of the conscription bill means a tremendous increase in Government buying of textiles and he also expressed optimism regarding the

R. C. Forrest, new president of Carded Yarn Group

effects of the cotton export subsidy on the industry.

"However," he declared, "the textile industry must work to increase cotton consumption." and following this statement he outlined the work of the Cotton-Textile Institute in raising funds for a cotton promotion program. In this regard he said approximately 10,000,000 spindles have already signed up for participation in the program which will cost the mill 2¢ per bale of cotton consumed during the next year. He hopes to have at least 14,000,000 spindles in agreement to underwrite this promotion program upon the completion of the drive.

Other business discussed at the meeting included the work of the joint committee from the Carded Yarn Group and the Association of Cotton Yarn Distributors appointed several months ago; and ways of improving sales policies through the group's program. A resolution was passed pledging cooperation with leaders of the National Defense Commission.

R. C. Forrest of the Uniontown, Ala., plant of the California Cotton Mills was elected chairman of the group succeeding E. N. Brower of Hope Mills, N. C. W. N. Banks, Grantville, Ga., was re-elected chairman of the colored yarn section of the Carded Yarn Group and Owen Fitzsimons of Charlotte, N. C., was re-elected secretary.

Gets Goodrich Award

Alfred E. Colby honored for lead in standards, through Pacific Factag

ALFRED E. COLBY, president of Pacific Mills, was given the Goodrich Award of Merit for "distinguished public service in taking the lead in the establishment and development of standards in the textile industry and in applying those standards to informative labeling of textiles," in the Goodrich Arena at the New York World's Fair, Sept. 28. Auguste Richard, vice-president, accepted the award on behalf of Mr. Colby, who was unable to be present.

Pacific Mills, as noted in these columns, recently inaugurated their new informative label, the Pacific Factag, which is based upon authoritative standards submitted to the National Bureau of Standards.

The occasion was Pacific Mills Day at the fair, planned and financed by the employees themselves, through the Worsted Division Athletic Association at Lawrence, Mass.; 1,192 employees from Lawrence made the trip.

In accepting the award, Mr. Richard said:

"It may be surprising to some that at a time when the attention of the American public is so completely occupied with our national defense program, an award for distinguished public service should be based not upon direct contribution to the Government, but for everyday service to the housewife and consumer."

PACIFIC GETS GOODRICH AWARD: Left to right, Auguste Richard, vice-president of Pacific Mills, who accepted the award on behalf of Mr. Colby; Betty Middleton, Death Dodgerette with the troupe of tire-testing auto-acrobats at the Goodrich Arena; and Fessenden S. Blanchard, division manager of Pacific, who has played an important part in the development of the Factag

Personnel Program—American Plan

Continental Mills plan pays in dollars and cents—and in a larger sense

By ADA WHITE *

Personnel Director
Continental Mills, Inc., Philadelphia

IN THE CONTINENTAL MILLS, with its 500 employees, the president of the company, Colonel Millard D. Brown, considers the human relations problem of such importance that he himself heads the personnel division. By active participation in its work he keeps his fingers on the pulse of the people in the plant.

Occasionally Colonel Brown talks to the entire plant on the subject of general business conditions in our organization, or on any other topic that is of vital concern to them. Our men and women like these informal talks by the president of their company, and do not hesitate during a meeting to ask questions or to enter into a free discussion of whatever subject is at hand.

For several years there has been in effect in our company an arrangement providing for the adjustment of wages according to the United States Bureau of Labor Statistics "Cost of Living Index." For every rise of so many points in the index, a corresponding rise in wages takes place. In the same manner a corresponding reduction in wages takes place for every drop of a number of points.

Our employees quite frequently seek advice on financial matters. Where circumstances warrant, money is loaned. In some cases the employee pays a reasonable rate of interest, but in the event of an emergency no interest is charged.

Another facility available in our organization is a savings fund society which encourages systematic savings by adding a certain percentage of interest to the regular bank interest of an employee's account.

To provide for the physical wellbeing of our people, we mantain a small but adequate dispensary where a part-time registered nurse capably and sympathetically looks after the health of the Continental family. Furthermore, she is often consulted about the health problems of the employee's family.

Employees having one year or more of service are given one week of vacation with pay.

Miss Ada White, personnel director of Continental Mills

The management, always on the lookout for new ideas and better ways to do the job, pays cash awards for accepted suggestions made by employees.

A monthly publication, known as *The Continental Pathfinder*, edited in the plant, has proved an informative and valuable contact. In it the employee finds brief editorials—sometimes inspirational, always simple and provocative of thought. Personal items have their place, athletic events are reported, service awards are always featured, and space is given to such fundamentals as comparison of wage rates and related economic subjects. Particular attention is paid to cash awards for accepted suggestions.

A NEW PLAN, instituted this year, permits an employee with certain service requirements to borrow, if laid off through no fault of his own, up to 60% of his weekly base pay for a specified number of weeks. This loan is repaid only when the employee returns to work. In the event of his death the debt is canceled. For those who do not have the required length of service a cash "separation allowance" is made for a period of three weeks, designed to cover the "waiting" period in the Pennsylvania Unemployment Compensation plan. The employee is not required to repay this allowance.

Problems of the supervising group are discussed at a monthly meeting attended by our foremen and the management group. The successful handling of men, time and motion studies, and spoilage are a few of the topics discussed.

Only American citizens are eligible for employment. Since the company's wage scale is considerably higher than that prevailing in the woolen industry, a better-than-average employee is attracted to the organization. The new man is at once given an outline of the company's policies and ideals. The background of the mill and its product is impressed upon him. He learns that paternalism has no place in the Continental organization; that every man is expected to do his share toward making this a successful and profitable place in which to work. If he is unwilling to do this, there is no place for him in the group. The company will gladly pay well for work above average, but every pay check and every promotion must be earned.

Does a program of this kind pay? Or for that matter, can the results of such a program ever be accurately measured?

Our answer is that our people are interested in their jobs—and are not susceptible to any form of labor unrest. They know that whatever benefits the company will also benefit them—and, conversely, that whatever slows up or stops the company's progress is going to have a like effect on their income. Since, in addition to their regular pay, they share whatever profit there may be at the close of the year, they are willing to put into the job that extra bit of effort and thought that often spells the difference between profit and loss.

Interested in their families and homes, in golf, in their bank accounts, and in week-end trips in their cars, these folk report for work cheerfully and in good mental and physical condition to do an honest day's work. Absence, except for illness, is rare.

Labor turnover is practically nonexistent. The plant and the people in it are a respected part of the community.

We say the program pays in dollars and cents, and in a larger sense by the knowledge that 500 families are participating in the American way of living—healthy, free, and independently self-supporting.

* Abstracted from Miss White's article in the Executives Service Bulletin, of the Metropolitan Life Insurance Co.

War . . . Wages . . . Worries

Discussed by Southern Hosiery Manufacturers at annual meeting in Asheville

HOSIERY MANUFACTURERS discussed the European War, industrial relations, the wage situation, overproduction of full-fashioned hosiery and numerous other topics vital to the industry during a two-day session of the Southern Hosiery Manufacturers Association held Sept. 13 and 14 at Grove Park Inn, Asheville, N. C. Highlights of the meeting in pictures are shown on these pages, and following are abstracts of some of the more pertinent remarks made in the formal addresses:

J. H. McEwen, president of the association and head of Grabur Silk Mills, Inc., Burlington, N. C.—"We thought this was going to be a profitable year, maybe even a boom year, but look what we've got. There is nothing to do but dig in and face facts."

Taylor R. Durham, secretary of the association—"Industry in months ahead can expect increased Government control of business as well as heavier taxation . . . Study carefully any contracts you sign under the Walsh-Healey Act or you may get in trouble through ignorance . . . The membership of the association during the last year was the largest in history."

A. W. Zelomek, economist, Fairchild Publications—"So far as silk operating policies are concerned, I recommend only moderate coverage in advance, at least until it becomes plain whether the war will continue. Internal statistical factors are strengthening somewhat; in fact, they are fairly encouraging. The continuing possibility that the war might end, however, requires that a strong note of conservatism be maintained." Mr. Zelomek also warned that the United States faces a period of good business for the next two or three years which undoubtedly will be followed by a shrinking of living standards. He recommended subsidizing South American trade and financing Latin American industrial development.

Dr. Gus Dyer, professor of economics, Vanderbilt University Nashville, Tenn.—"The United States developed through freedom as advocated by Washington and Jefferson . . . Let's restore the Constitution!"

Charles P. McCormick, president, McCormick & Co., Baltimore, Md.—"Through multiple management [four boards of directors composed of employees] my company has increased production 34% since 1929 and paid off a $700,000 mortgage. Today, I can take a six months' vacation and my business will run itself. Can any of you do that?

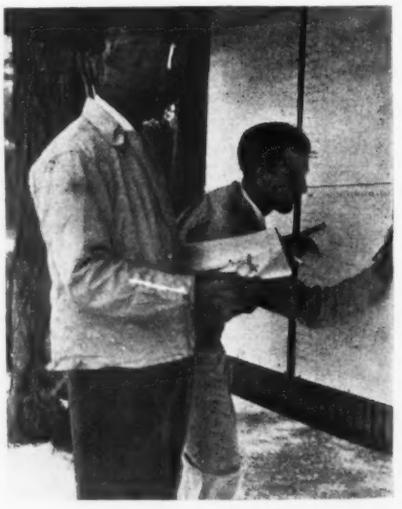
"Guarantee your employees a certain amount of work even if its only one month out of the year. If I wanted a

There was plenty of serious lobby talk between sessions if the expressions of these two gentlemen mean anything. They are R. J. R. Smith, vice-president of Claussner Hosiery Co., Inc., Paducah, Ky., and C. S. Kincaid, president, Magnet Mills, Inc., Clinton, Tenn. But doubtlessly they were discussing a fishing trip or golf shot

Other lobby conversation was not so serious. Clarence G. Burton, (left) president of Lynchburg, (Va.) Hosiery Mills, Inc., shown here with Ben S. Phetteplace, general manager, Southern Franklin Process Co., Greenville, S. C., was interested in the camera used by TEXTILE WORLD's reporter

Returning to the Inn we find Snelson Chesney, vice-president of J. P. Maguire & Co. (center) in a huddle with L. Finkel, president of Lee Dye Works, Philadelphia, and R. K. Boadwee, vice-president of Julius Kayser & Co., New York

The usual mad scramble for rooms didn't bother amiable, "Andy" Anderson, president of Fidelity Machine Co., because he arrived several days ahead of the rush to catch up on his golf and so on



Leaving the somewhat heavy atmosphere of the conference room for a moment, we look in on Sam Diggle, one of Dixie Mercerizing Co.'s star peddlers, as he officiates as usual over the golf tournament. His able assistant (doing the work) is Erwin Laxton, who represents Arnold Hoffman & Co., out of Charlotte

At the banquet are, left to right, Secretary Durham, Mrs. Durham, President McEwen, Mrs. McEwen, Treasurer Seifart, and Speaker Zelomek

bunch of Communists I'd arbitrarily cut off the salary of every one of you gentlemen in this room for 13 weeks, as some of you do your employees in slack times, and believe me I'd have a fine crowd of 'isms.'

"Out of 2,109 suggestions from our junior board of directors we have rejected only six.

"McCormick company divides the first 28% of its surplus earnings among the employees—14% to all workers and 14% to the employee-elected boards of directors. And how they try to become a director! We have eliminated the piece-rate system of paying by substituting a series of graduated promotions to better jobs. This has reduced machine breakdowns by 35%.

"We insist on regular 5-min. rest periods, and if any of you don't believe it increases efficiency, try tapping one typewriter key for several hours without a break.

"If you want to find out about your business listen to one of your employees talking in a saloon when he's half-drunk.

"Remember above everything that your employees are human beings—and that they outvote you and other industrialists by at least nine to one."

Lobby Talk—Wages and overproduction held the spotlight despite the war situation. Wage cuts, it was feared, will continue to spread through the full-fashioned industry like wildfire. The sad part of it, according to manufacturers who have tried to maintain the present level, is that it will all level out within a few cents of the present consumer price and no one will benefit. Seamless manufacturers talked about ways of getting the Government to defer any further wage increases for the present which they claim the industry cannot stand.

Resolutions—Any increase in the wage rate of seamless hosiery mills at this time, it was resolved, would only serve to create additional unemployment because many of the mills have already found it necessary to replace a transfer equipment with automatic machines and to release a large number of employees. It was urged that several hundred other industries still operating under the statutory minimum be considered before advancing the rate in this industry which was advanced just last September and is scheduled to be advanced again soon.

The association endorsed the Logan-Walter Bill which would require Federal agencies to hold hearings in public and publish their regulations and amendments before they are effective.

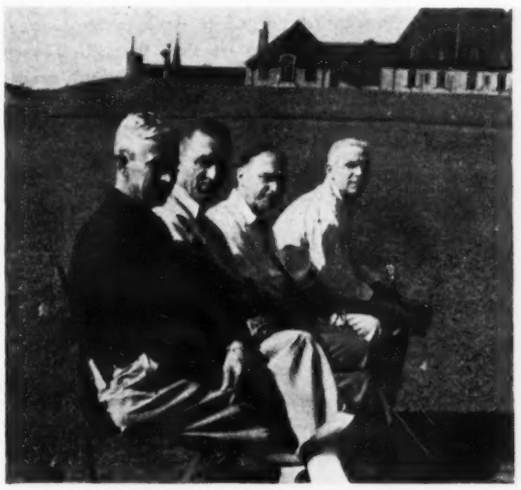
The association endorsed enactment of amendments providing for the elimination of many of the "iniquities" now in the National Labor Relations Act.

Officers of the association all were reelected for another year. They are J. H. McEwen, president, Burlington, N. C.; R. T. Amos, vice-president and chairman of the Seamless Division, High Point, N. C.; H. A. Lineberger, vice-president and chairman of the Full-Fashioned Division, Belmont, N. C.; Fritz Seifart, treasurer, Charlotte, N. C.; Taylor R. Durham, executive secretary, Charlotte.

Golf scores—Low net Ed McMillin, 60; low gross Albert Neal, 70; second low net Jim McDowell, 65; third low net Robert Griffith, 66. Mr. Griffith awarded the prizes at the banquet.

Chatting informally on the terrace are Jack Wolin, president of I. & J. Wolin, Inc., New York, selling agents, and Joe A. Thompson, manager of Thompson Hosiery Mills, Burlington, N. C.

The boys from Marion—Kneeling are W. W. Neal, Jr., of Marion (N. C.) Knitting Mills, and C. Jack James, of Elizabeth James Mills; standing are "Hard Charley" Smith, of Josephine Hosiery Mills, and husky Albert Neal, of Marion Knitting Mills, who later won low gross in the tournament. Note Grove Park Inn, scene of convention in background



Golfers in the Sunshine—J. Gaither, of Ridgeview Hosiery Mill Co., Newton, N. C., and three Duplan Silk Corp. representatives—Bob Griffith, G. Friedlander and H. H. Conner

For many years this ancient elevator "boy" has ferried people up and down quaint elevators hidden deep back in the gigantic rock mantles of the Grove Park fireplaces. He knows how to cope with the permanent guests, such as Dorothy Dix who comes here regularly, but usually he is just a little baffled by the actions of conventioneers who sometimes push him out and run the elevator themselves. Inside are two of Asheville's pretty girls who came over for the dance which followed the banquet

Mill-Worker Looks at the South

Third generation traces progress of the human element in southern mills

By BERRY J. BLAND

The most interesting feature of this article is the fact that the author is a member of the third generation of his family which has gained its livelihood through the southern textile industry. His grandfather took a job in a Rutherford County (N. C.) cotton mill about 1895. His father went to work in the weave-room there and later moved to several mills in the Carolinas, going to Cramerton in 1925. The author of this article started to work in the Cramerton Mills there at that time, first as a filling hauler, and from there, successively, to filling inspector, section man, second hand, and now overseer of the preparation department on the second shift.

With such a background, his thoughts on the human element in southern mills are of particular interest.—*Editor.*

★ ★ ★

"**THIS TOOL**, ladies and gentleman, is the heaviest tool that you will need to use while working in the mill. This is a reed-hook, lighter than a pocket knife, but with it you can earn a dollar a day after you learn to use it. How many can equal that on a farm at much harder labor?"

The question ended the talk of the man standing on the back of a covered wagon. The appeal was made to a group of men and women who had gathered at the cross-roads store to hear the "furriner" from the city tell of his cotton mill—one of the mills which were being built in the South during the latter part of the nineteenth and early twentieth century, mills that were reviving a prostrated agrarian South and building the foundation of a new industrial Southland.

The mill agents traveled in covered wagons, sometimes with a minstrel show or string band to attract a crowd. Their technique was that used in the old time medicine show. They would stop at a village or cross-road store, draw a small crowd, make their proposition to the people, and then sign anyone who was interested to an agreement to go to work in the mill which they represented.

Their appeal was further fortified by the accounts of former neighbors returning from mill villages to visit their old homes. "We can get you a job that beats cotton farmin' anyway you take it," they would say.

So more decisions were made, more farms were deserted, and more families moved to the mills.

EVERYTHING WAS NEW in the villages. New houses on newly laid out streets, new faces, strange customs, and jobs that were so different from handling the heavy tools of farm labor. However, the new workers readily oriented themselves with the help of their new friends and of former farm neighbors. Usually the first thing they did was to open an account at the "company store." There the family could buy food, clothing, and other necessities. These purchases were charged to the account of the worker and paid for out of his wages on "pay-day." The greater number of people coming to the mills had been accustomed to having a landowner or store-keeper to "stand good" for their annual supply of farm and home necessities. They didn't have any cash on hand when they moved to the mill, therefore the company stores served this purpose. However, everyone looked forward to the time when he would get enough money ahead to pay his own way.

The store was not the only business in town that had a credit system. When a new weaver complained to his "sideweaver" that he "shore did need a haircut, an' it's still two weeks 'till payday," his friend told him to go to the barber shop and "go on the list." "If you go to the shop an' tell 'em that you're workin', they'll put you on the list. Then you can get yore barber work done a whole month an' they'll take a dollar out of yore time to pay for it."

THE NEWER FAMILIES tried to fit into the village life as quickly as possible. "Actin' countrified" was about the worst thing that could be said of anyone. Learning by looking, the new people copied the manners and dress of the more urbane ones. Regular hours of work left them regular hours for their social life, most of which revolved around the church. The old combination of "meetin' and eatin'" at the church services, which was purely rural in its origin, provided social as well as religious contacts. The auxiliary organizations of the church sponsored ice cream suppers, fish frys, barbecues, etc., and if one did not belong to one of the churches, he was practically a social outcast.

Since these people had never had a great deal of free time before, they had never developed spare-time activities or hobbies. However, they found a variety of things to turn to for amusement and relaxation. Many of the men became interested in fraternal organizations, joining any which offered the opportunity. Vegetable gardening in the summer and hunting during the winter months gave a great many more employees outdoor exercise.

The average mill worker could hardly read or write. This ignorance naturally encouraged superstition. A brass wire finger ring would prevent rheumatism. Nearly everyone carried or wore good luck charms. Asafetida wrapped in a bag and hung around the neck was a blanket preventative of all children's diseases. Soot and cob-webs generously rubbed into a new wound left a permanently black scar, but stopped the bleeding at once.

With the passage of time, employees, who had by years of work familiarized themselves with their jobs, who more easily became acclimated to the inside work than others, and who were imbued with the good old American spirit of doing more of the job in hand than the man next to him, found they could easily do more than the prescribed amount of work and were not satisfied if they were not allowed to do it. While weavers in the Carolina mills were running six looms, a man came from a mill in Danville, Va., and refused to take less than an eight-loom set. It was the talk of the town when he went to work on the eight-loom set, and soon others in the weave room were asking for eight looms. Time after time this same situation happened in that and other mills.

Chief among many problems which these early southern textile workers faced was one of generalized fear. Their unsettled status made them afraid. Fear of what, they could not definitely say. Yet, deep within most

of them was an unknown fear—fear of losing jobs, of not being able to hold their own in an expanding industry. They were afraid to buy better home furnishings for fear of losing them, either because of loss of jobs or from moving from place to place.

It was an unsettled time, a transitory time for the workers. Rarely did a family stay in one town longer than 18 months.

It was during this middle period that the operators began to pay more attention to housing conditions in the villages. In order to compete with the newer villages, the managements of the older mills had to remodel the older houses to bring them nearer to the standard set by the newer ones. These had electric power, running water and bathrooms; windows were screened, and restrictions placed against the keeping of farm animals close to the homes. Just as in the earlier days mill agents had offered better wages and housing as an inducement to the farm and mountain people to come to the mills, now the operators offered even better housing conditions either to encourage workers to stay where they were, or to attract a better class of workers from less progressive mills.

"This reed-hook is the heaviest tool you'll need to use in a mill."

THE GREATEST HANDICAP to the early workers was their lack of formal education. Many were ambitious, some achieving positions of responsibility in the mills, yet all realized that their lack of formal training was a serious handicap, and were determined that their children should not be thus handicapped. They also lacked knowledge of money management—how to buy food, appropriate clothing, and recreation. However, the majority of these adult workers were not content to let these circumstances remain as they were. Night schools were conducted for those who wished to improve themselves. The older employees took advantage of these classes, and incalculable improvement in general well-being was accomplished.

The third generation of southern textile workers who have now taken their places in the industrial life of the South were young children at the time of the World War or were born since then. They have the experiences of their parents and grandparents to aid them in planning their lives. They are more inclined to stay put and not waste too much time in getting down to one place. People and industry have become stabilized.

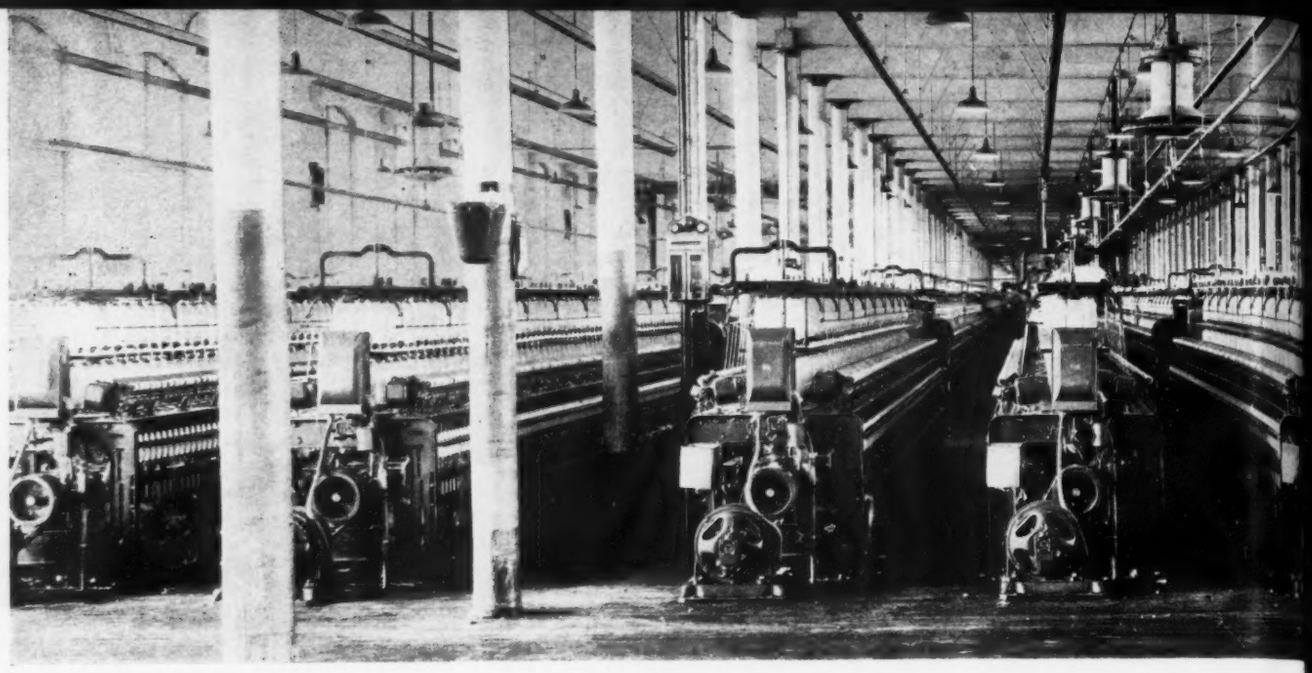
Merchants realize that in this group is an untapped market that can be developed to the advantage of all concerned. The worker who cannot save enough money to buy an automobile, electric refrigerator, home furnishings, etc., can and will pay a little money down and a little more each week. Easy terms are arranged and this credit system helps to raise the standard of living just as the crude credit system of the "company store" days helped workers get a start in new surroundings.

Education is increasing remarkably. The average education for the entire group of people called southern textile workers is seven years of formal schooling. But for the third generation separately, the average is eleven years of schooling. Southern educators, having realized that there is a large percentage of students who will never go beyond high school, have prepared courses of study that will give these young people a broader knowledge of practical subjects. The earliest experiment in this direction was the establishment of domestic science courses for girls about 1925. Since then high schools in large textile centers have introduced into their curricula courses in textile mechanics, designing, etc. The young men going into the industry now are not satisfied with merely getting a job and going to work. They try to get jobs in those mills which provide additional training in vocational classes. Every encouragement is given to everyone to further his or her education without reference to age. In 1938, at the Cramerton (N.C.) High School, two mothers finished high school in the same class with their sons. In the same class, a man and his wife, both workers in the weave room, finished their high-school training.

WHILE THE CHURCH continues to be the backbone of most social activity, the radio, automobile, and movies have greatly diversified the recreational activities of this generation. There is more free time to devote to self-improvement, recreation, and sports because working hours are shorter. There are golf and tennis clubs, basketball and baseball teams. Many enjoy bowling, swimming, hunting and fishing. Others join the activities of book and dramatic clubs, and similar cultural groups. The Boy Scouts of America provides an excellent means of constructive recreation for the younger boys. There is hardly a mill community in the South that does not have at least one troop of Boy Scouts.

The sentiment for home-ownership has spread rapidly among mill people in the last few years, and many are building their own homes close to the mill villages. Good roads and automobiles make it easy for them to live in one locality and work in another. The 1940 census shows that over 1,000 privately-owned homes have been built close to Kannapolis, N. C., during the last ten years. This type of home building has been duplicated in nearly every mill section of the South. The modern textile employee believes in the future of southern textiles and is not afraid to invest his money in the future of his community.

There is a general stiffening of backbone among them as they find new incentives for making even better homes and surroundings for their families. They feel more than ever that they are a vital part of the community, and that the success and atmosphere of the community in which they live and expect to rear their children depends upon them. Favorable conditions for self-help and improvement, and the added advantage of home-ownership, brought about (1) by the recent practice of building new homes on privately-owned property close to the mill village, and (2) by the sale of mill-owned houses to the employees, make them better citizens and more responsible workers. They are on their own, and by their own will and character, they survive.



From Opener Room to Cloth Room

Dwight Mfg. Co. modernization program has included every department in mill

TEN YEARS AGO Dwight Mfg. Co., Alabama City, Ala., inaugurated a modernization program designed to eliminate waste motion and to improve quality of products. Since then the work has progressed systematically, one department after another being brought up to date by revamping and rearrangement of machinery and installation of new equipment. With the latest step in the program now completed—replacement of obsolete looms with 1,366 Draper Model X looms—the entire mill from opener to cloth room has now received attention. The accompanying photographs taken in various departments show how completely the plant has been modernized. The results of the program are reflected in the improvement in quality of product, in the increased production per machine, and in the better working conditions for employees.

The initial step in modernizing the mill involved a radical change in the card- and spinning-room layouts. Direct uni-directional flow of product from one process to the next was obtained by relocating all machines in these departments. The machines are now arranged lengthwise, instead of across the room, and the material in process travels from drawing, to roving, to spinning with a minimum of "mileage." At the time this change was made some new frames were installed and those already in place were converted to long-draft. The changes made in these departments permitted a considerable increase in yarn production, with no increase in floor space.

Present card room equipment consists of 480 Saco-Lowell cards with Joseph Sykes clothing. A Dronsfield Bros. card flat grinder is employed for keeping the cards in good condition. Other card room machinery includes 72 drawing frames each with two front rolls of Armstrong cork, and 54 slubbers—23 of which are new machines, and the other 31 recently rebuilt. The new frames are Whitin long-draft, and the re-built frames are equipped with Whitin-Casablancas long-draft system.

In the spinning room (Fig. 1) there are 63,000 spindles, practically all Whitin long-draft, running on 4s to 21s singles yarn. Frames are individually driven by 7½- and 10-hp. motors and V-belt drives. Parks-Cramer bunchless overhead cleaners are used to promote cleanliness and improve yarn quality. A conditioning room is equipped with Bahnson humidifiers. At convenient locations in the spinning room there are five Terrell Machine Co.'s latest model quill strippers. Hygrolit machines are used to set the filling yarn. Near the center of the long spinning room there are twelve No. 40 winders and three high-speed Roto-coners which were

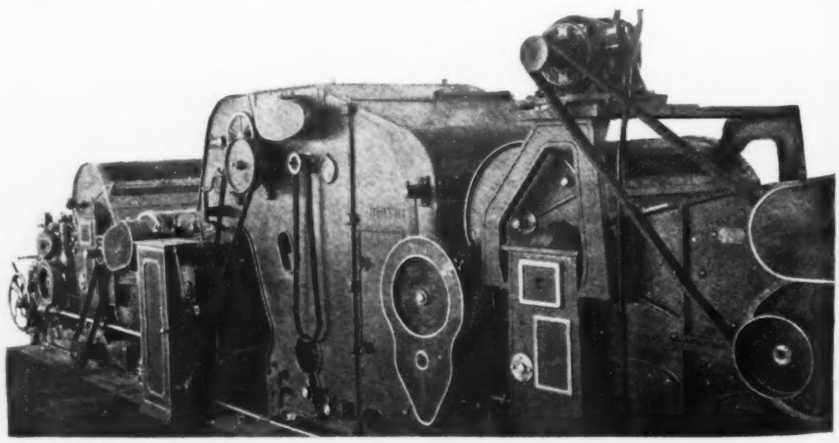


Fig. 2. One of fifteen Whitin one-process pickers installed in 1933

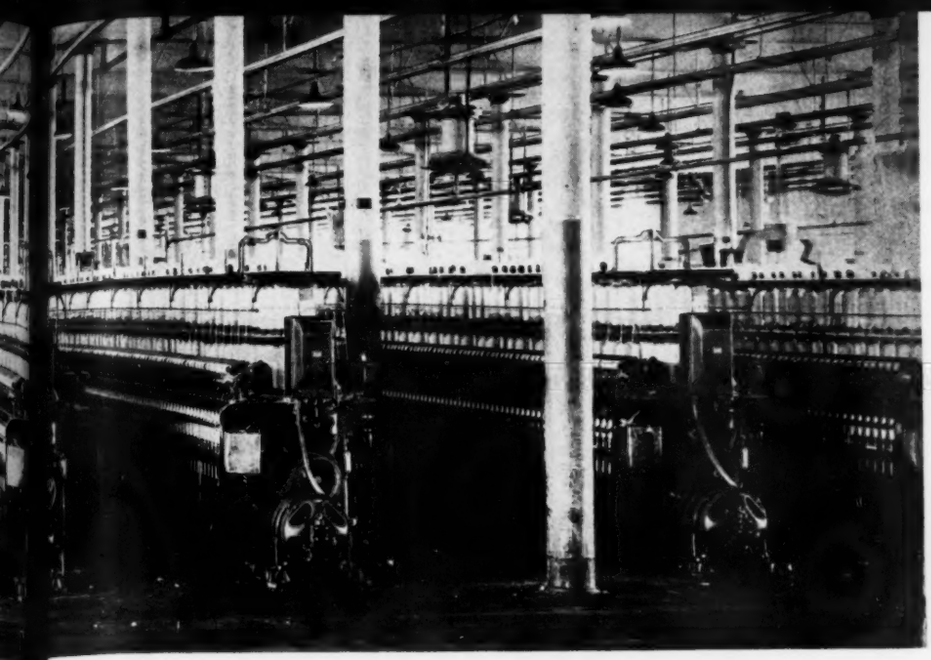


Fig. 1. View in modernized spinning room at Dwight Mfg. Co.; Whitin long-draft frames are individually driven and are equipped with Parks-Cramer bunchless overhead cleaners

Photos by P. C. Smith

manufactured by Universal Winding Co.

Dwight uses both local and shipped cotton. Ample platform space is provided for sampling and weighing-in of cotton. Warehouse space is utilized to the utmost advantage by tiering the cotton in high stacks, neat and orderly in appearance, using for this work an Economy Engineering Co. bale-stacking machine.

The opener room is conveniently connected to this warehouse. In order to secure an even, uniform blend, it is customary in the opener room to break down 15 to 20 bales at one time for each opener, and to feed approximately equal amounts from each bale to the machines. The cotton passes through a Centrif-Air machine and a Murray cleaner, and is blown up to the picker room located on the third or top, floor of the mill.

The picker room contains 15 Whitin one-process pickers (Fig. 2) installed in 1933. They deliver 48-lb. laps, which are stored on trucks for delivery to the card room. A Parks-Cramer lap-weight indicator contributes to the production of uniform laps.

Following the modernization of the preparatory and spinning departments was the installation in 1930 of Saco-Lowell high-speed warpers and Universal Winding Co. creels. Parks-Cramer blowers, with control device made in mill's own machine shop, are ingeniously applied to the warpers to keep the yarn on the warp beam free from slubs.

The slasher room (Fig. 3) began to receive serious attention in 1937. And today the slasher room at Dwight Mfg. Co. is perhaps the most ultra-modern to be found in this country. Six high-speed Saco-Lowell slashers are in service. Magazine creels are provided to decrease the time-out for change-overs. New Departure Transitorque variable-speed drives and Taylor Instrument

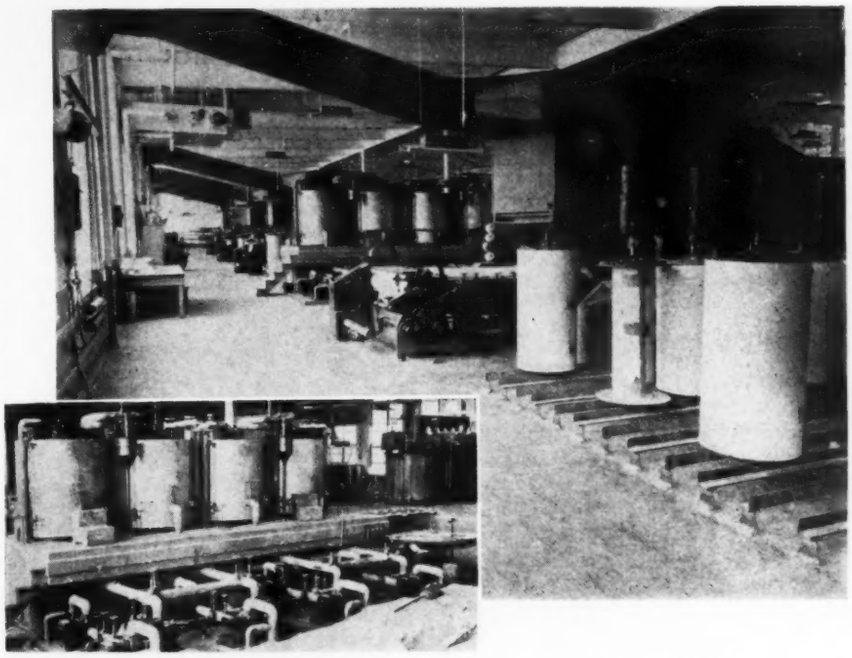


Fig. 3. The ultra-modern slasher room contains six high-speed Saco-Lowell slashers; inset shows size cooking and storage kettles

Fig. 4. A total of 1,366 new X Model Draper looms has replaced obsolete equipment in the weave room

Fig. 5. Equipment in the well-lighted and efficiently arranged cloth room includes Curtis & Marble, Hermas, and Singer machines

Cos. full slasher control system are used. The distribution system from size kettles, to slashers, to waste system, is modern in every respect. All liquids are handled and controlled, through a piping and valve layout, from the central preparation platform. At one end of this platform and overhead is the starch-storage bin with automatic elevator, and automatic feed to weighing-in scales. All slashers exhaust outside the mill. The room is heated and ventilated with a Buffalo Forge Co. combination heating and ventilating system.

Weave-room modernization was started in 1936 with the installation of 508 30-in. X Model Draper looms. In 1938 there were added 436 36- and 40-in. looms of the same model. Total number of new looms was brought to 1,366 with the installation in 1939 of 390 more 40-in. X Model looms. A view of the weave room appears in Fig. 4. The looms are equipped with individual Westinghouse motors and cork friction clutches, Rhode Island warp stop motions, 24 in. diameter beams, Denman pickers, Veeder-Root pick counters, and a yardage counter invented by A. J. Riley, an employee of the mill, and made in the mill's machine shop. The purpose of this counter is to permit doffing cloth at predetermined lengths of cuts and eliminate cut marks. In general, the new looms are operated at 192 picks per min., and production per loom is some 20% greater than with the older looms which they replace.

The cloth is brushed, trimmed, inspected, and folded under ideal conditions in the well-lighted, well-arranged cloth room (Fig. 5). In the main, Curtis & Marble machines are in use. There also are a new Hermas trimmer and several Singer portable sewing machines. All goods are shipped in the gray. There are some 65 constructions regularly in production at the mill.

Dyeing With Naphthol Colors

How to improve fastness to crocking

A PRACTICAL INVESTIGATION was carried out recently in the laboratory of Imperial Chemical Industries, Ltd., to determine what method of applying naphthol colors to cotton piece goods will yield dyeings having the best fastness to crocking. Results of this study, as reported by E. R. Wiltshire at a meeting of the Society of Dyers & Colourists, are summarized below.

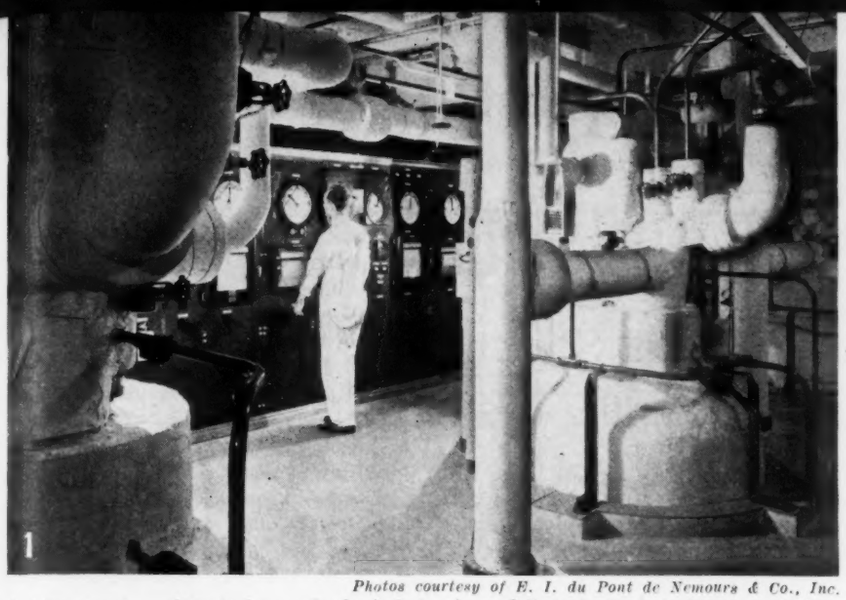
Fully bleached fabrics are satisfactory for dyeing without further treatment; when gray goods are to be dyed, they should be given a thorough preliminary scour. Naphthols of high substantivity should be employed. The naphthols should be pasted and dissolved with the aid of suitable auxiliary products which do not form insoluble complexes with any products present in the subsequent developing bath. Soft water should be employed.

Impregnation with naphthols should be carried out on a jig; the goods should be given two ends at the boil, and additional runs in a cooling bath which is allowed to drop to about 120° F. over four to six ends. Preferably, the fabric is entered into the bath in the dry state; this is particularly important in the case of heavy, tightly woven goods. Common salt is employed to aid exhaustion of the bath.

After impregnation, the material should be mangled efficiently to remove as much as possible of the mechanically held naphthol solution. Next, the goods are dried in an air dryer or on cans. If the latter are used, the first two or three should be lapped or maintained at a fairly low temperature. The fabric leaving the dryer should contain 10 to 12% of moisture.

The dry, naphtholated material should be developed on a pad, one passage being sufficient for most fabrics, although heavy materials may require two or more runs to insure adequate penetration. Padding with the diazo-salt solution must be carried out cold. After development, the goods are given two ends at 100° F. on a jig in a bath containing 1 pt. of 32° Tw. hydrochloric acid in 50 gal. of water.

Following the acid treatment, the material is rinsed well and then given six ends at the boil in a solution containing 2 lb. of soap flakes and 2 lb. of one of the newer synthetic detergents which are stable to hard water. When soda ash must be employed to facilitate change of shade, as is true of many browns, the amount should be reduced to not over 4 to 8 oz. to 50 gal. Finally, the goods must be freed from soaping liquor by efficient rinsing with hot water. In cases where the last traces of soap are difficult to remove, treatment at 110 to 115° F. in a solution containing 8 oz. of one of the acid-stable dispersing agents and 3 pt. of 32° Tw. hydrochloric acid is effective.

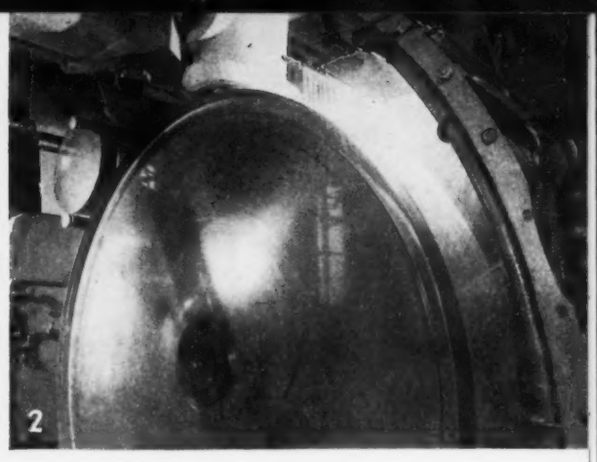


Photos courtesy of E. I. du Pont de Nemours & Co., Inc.

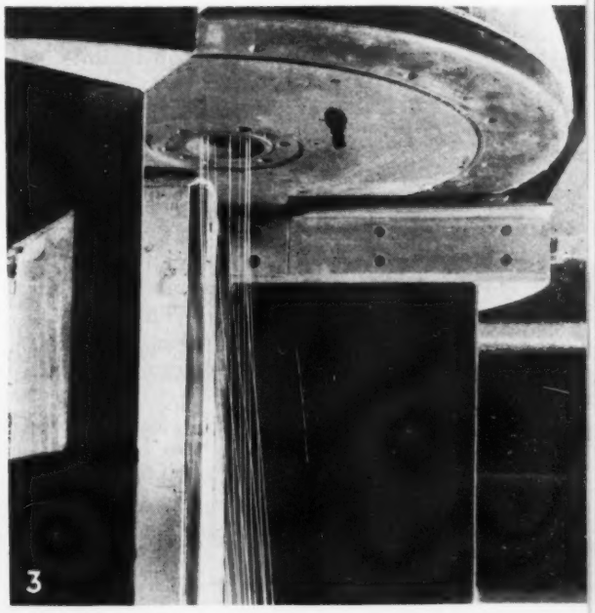
1. First step in making Nylon at Seaford, Del., plant of E. I. du Pont de Nemours & Co., is evaporation of water from chemicals shipped from Du Pont plant at Belle, W. Va. Nylon intermediates are pumped into insulated tanks and then pass into these autoclaves where the chemical process known as polymerization takes place

Nylon Production

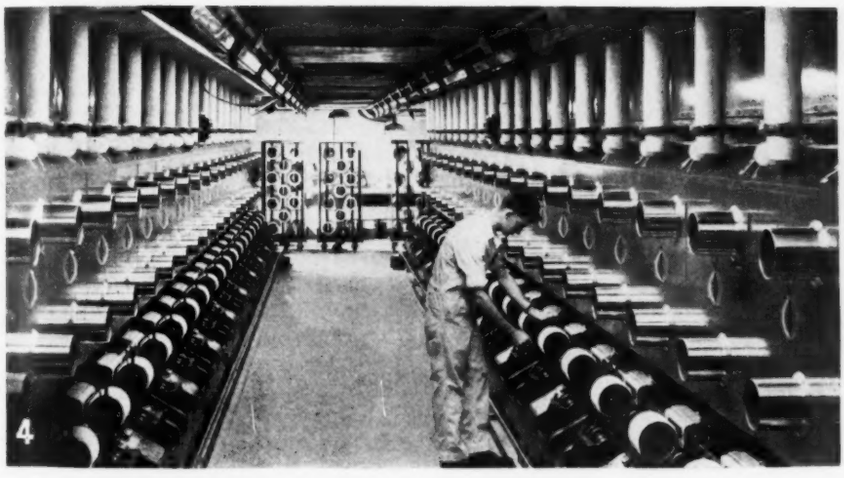
Steps in process at Du Pont plant



2. The molten polymer is extruded on this huge casting wheel and is quickly sprayed with water which helps it to solidify into a strip resembling ivory; in later operations it is chopped, melted, and extruded again —this time in filament form



3. Fine filaments of Nylon are extruded through holes in this spinneret; the filaments are smooth and almost round



4. (Left) On machines like these the filaments are wound on headless packages

5. (Below) A sizing compound is applied to the yarn as it is wound from one-package to another; the sizing, which protects the yarn during subsequent textile operations, is removed in the finishing process

6. After the yarn has been wound on spools or cones, each package is inspected before it is wrapped and packed for shipment

New-Fiber Symposium

Feature of American Chemical Society meeting of most interest to textile men

A BIG DRAWING CARD at the meeting of the American Chemical Society, held Sept. 9 to 13, in Detroit, Mich., was a symposium on new fibers, new fabrics, and new finishes. Among the developments discussed were Nylon, Vinyon, Fiberglas, casein fibers, soy bean fibers, acetate rayon, Electrocoated fabrics, and finishes obtained with synthetic resins and other compounds introduced recently to the textile industry. Articles which have appeared in TEXTILE WORLD in the last year or so have described each of these various developments in considerable detail. Accordingly, the following report of the symposium includes only the highlights of the discussions.

In a paper outlining the production, properties, and applications of Nylon, Dr. G. P. Hoff, of E. I. du Pont de Nemours & Co., stated that elastic recovery of Nylon is 100% when stretched 4%, as against 50% for silk and acetate rayon and 30% for viscose. Dry strength of Nylon is appreciably higher than that of silk. Water absorption is 3.5%, contrasted with 13% for wool, 12% for viscose rayon, and 11% for silk. Nylon yarn and fabrics are practically nonflammable, and, as currently offered, have a melting point of 487° F. The fiber is resistant to mildew, molds, and moths, and is completely inert physiologically.

Vinyon finds its largest use at present in filter cloths, but many other uses are suggested by its properties, according to Dr. F. Bonnet, of American Viscose Corp. For example, tests conducted on the Florida coast indicate that fishlines and nets made from Vinyon do not deteriorate after six-month's use, whereas all other types showed partial or complete disintegration. Vinyon is very resistant to strong acids and alkalis at ordinary temperatures. It is water repellant and is as strong wet as it is dry. It can be dyed by the use of assistants. It is thermoplastic and shrinkage takes place after heating above 150°C.

Fiberglas opens new doors for textile products, but glass fibers have not yet attained universal applicability, not being suited in present forms to dress fabrics, stated Games Slayter of Owens-Corning Fiberglas Corp. Glass fibers will melt but they cannot burn. Their temperature resistance is high when formed in the mass or woven as a fabric. Fiberglas yarns, tapes, and fabrics used in the electrical industry can safely withstand temperatures in the neighborhood of 1,000° F. At 800° F. electrical tapes of Fiberglass have a greater strength than is presented by cotton tapes of similar size and thickness at ordinary room temperatures. Glass is also known as a chemically staple product. Glass is not harmed by any acid except hydrofluoric. Nevertheless, when the surface area of the glass is expanded many thousands of times—as it is in the formation of glass fibers—one must become cautious in discussing complete immunity from attack.

PROTEIN FIBERS derived from casein and soy beans were discussed in papers by F. C. Atwood, of Atlantic Research Associates; and R. A. Boyer, of Ford Motor Co. Mr. Atwood outlined the specifications which protein-base fibers will probably be required to meet before commercial success is achieved and presented data on the properties of fibers of this class now available. As a generic term for such fibers he suggested the name "proton fibers."

Knitted bathing suit made from Vinyon as part of development program to determine suitability of this synthetic fiber for various applications

After describing the experimental production of soy bean fibers, Mr. Boyer stated that the fiber as made at present has about 80% the strength of wool, it has more elongation both wet and dry, does not wet so easily as wool or casein fiber, and does not promote mold growth so readily as casein fiber. The fiber blends well with wool and cotton and has been processed satisfactorily on both cotton and worsted textile equipment. Plans are being made for a pilot plant capable of producing 1,000 lb. per day of soy bean fiber.

Acetate rayons at present account for approximately 30% of total rayon production, according to Dr. Harold DeWitt Smith, of A. M. Tenney Associates. Recent developments include yarns which have a higher tensile strength than any other synthetic fiber commercially available; and an extra-light, fluffy, acetate rayon produced by incorporating air bubbles in the spinning solution.

Two types of electrocoated fabrics described by N. E. Oglesby and L. E. Hoogstoel, of Behr-Manning Corp., are women's dress goods decorated with a pile design and an all-over covered pile upholstery fabric. An outstanding feature of fabrics manufactured by the electrostatic process is the density of the pile, as high as 275,000 fibers per square inch being easily obtained.

The finish has become as important as the fabric construction, it was asserted by Dr. D. H. Powers, of Rhom & Haas Co., in a paper on the use of resins and plastics for modification of textile fabrics. Impregnating resins now available do not alter the surface appearance of fabrics; but may greatly improve the tensile strength, resilience, durability, luster, and firmness. They impart to vegetable fibers many of the properties of animal fibers. For example, resin-treated spun-rayon fabrics are comparable in appearance and handle with worsted fabrics.

Modern textiles discussed by Kenneth H. Barnard of Pacific Mills include cotton flannel impregnated with colloidal silver and used in protective bags for silverware to prevent tarnishing; and wall fabrics which are spot-proof, vermin-proof, and fire-resistant.

The symposium was held under the auspices of the division of industrial and engineering chemistry, with Gustavus J. Esselen presiding.

Lamp Performance Improved

Proper protection from vibration permits use of higher-output lamps

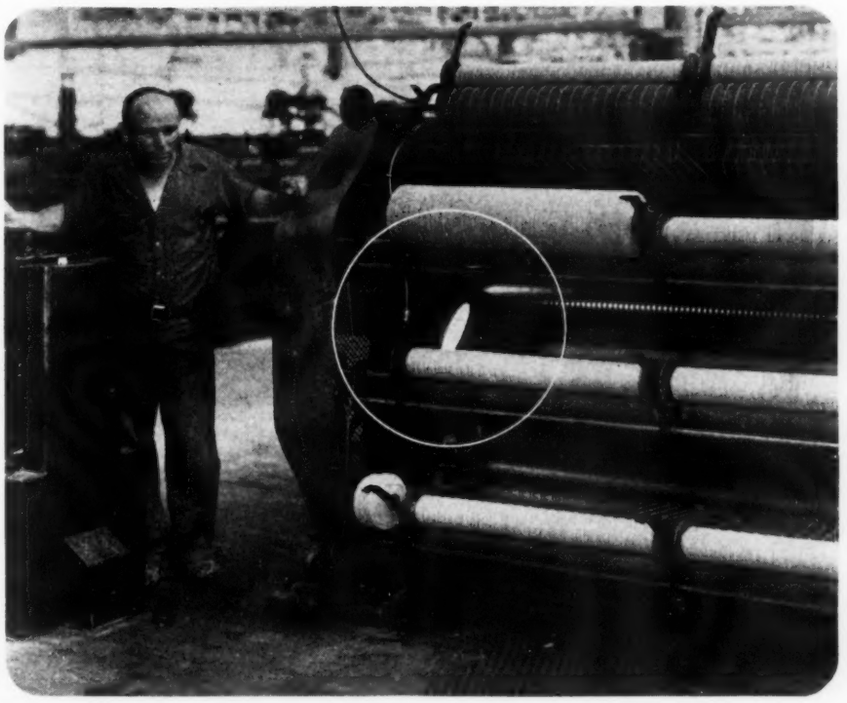


Fig. 1. Lamp on woolen card is protected from vibration by special mounting

By JAMES D. HALL

Commercial Engineer, Westinghouse Lamp Div., Westinghouse Electric & Mfg. Co.

THE DETRIMENTAL EFFECTS of shock and vibration on Mazda lamp performance are particularly apparent on the low-wattage lamps most commonly used for local lighting purposes. For this type of lighting it frequently is the custom, as a matter of convenience, to mount the sockets directly on some part of the vibrating machinery. Such practice is sure to result in excessive lamp consumption. To improve the service obtained from lamps under such conditions, especially constructed vibration- and rough-service lamps are available. Such lamps, however, usually are less efficient in the production of light and more expensive than the corresponding general-lighting lamps, as shown in the accompanying table. Consequently, from the standpoint of economics it generally is desirable, where possible, to provide some means of protection from vibration or shock so that standard lamps can be used.

An example of what can be accomplished in this respect is found in a large woolen mill in the New York metropolitan area. Here, although the general illumination is of satisfactory quality and intensity, it is desirable to illuminate certain parts of the carding machines with 60-watt lamps in sockets mounted on the machines (See Fig. 1). Under such conditions, standard general-lighting lamps gave very poor life, due to the severe vibration to which they were subjected. The lamps were burned in a horizontal position, making vibration-service lamps unsuitable. While 50-watt rough-service lamps showed a considerable improvement in life, the lower light output was objectionable. The final and most satisfactory solution was reached by mounting the lamps on a Keldur base, as indicated in Fig. 2.

Keldur, an oil-resistant material having a high "damping" characteristic, serves to so protect the lamps from shock and vibration from machinery that the life obtained from general-lighting-service lamps has been increased several hundred per cent. This, of course, reduces the lamp bill. But, of greater importance to the lamp user, the nuisance factor and labor cost of frequent lamp renewals are minimized.

COMPARISON OF 50 AND 100-WATT 120-VOLT MAZDA LAMPS

Watts	Service	Initial Light Output Lumens	List* Price
50	General	660	$0.13
50	Vibration	545	0.20
50	Rough	455	0.25
100	General	1600	0.15
100	Vibration	1300	0.45
100	Rough	1200	0.35

* As of June 1, 1940 Subject to change.

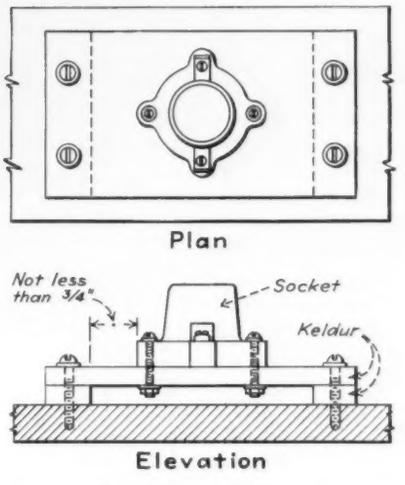


Fig. 2. Details of socket mounting

When lamp renewals, particularly on the lower wattage types, appear to be excessive, an investigation may disclose adverse service conditions to be the cause. In such investigation it should be borne in mind that high-frequency, low-amplitude vibration is the most insidious in that it is not readily discernible, while its effect on lamp life may be serious. Where shock or vibration is present, it may be found that, of all investments for lighting equipment, the small sum required for lamp-protective devices will pay the greatest dividends.

Stoppages of Woolen Cards

Cost mills real money; suggestions for decreasing their frequency and duration

By RICHARD M. DORIAN
Assistant Superintendent
A. & M. Karagheusian Spinning Mills

THE ULTIMATE quality of woolen yarn is basically established in the card room. If satisfactory roving is not obtained from the card, there is no intermediate process by which it is possible to remedy the defects. Hence, the carding operation is of preeminent importance. To begin with, what are some of the results to be obtained from the carding department? They include:

1. Maximum production without lowering quality of product.
2. Minimum stoppage due to machinery maintenance.
3. Lowest possible waste and labor costs.
4. Harmonious and cooperative relations between supervision and labor.

These functions are the direct responsibility of the carding overseer. This article will be confined to discussion to the first two topics: maximum production and minimum stoppage.

One can recall that, years ago, a card room would start production of a particular type of yarn and continue on this quality for several weeks. Yarn was produced white, for skein dyeing. Shifts were single, with plenty of time for maintenance.

Today, the picture has changed. Instead of a few qualities, yarns are spun to every size and specification under the sun. The demand is for more stock-dyed yarns. Instead of one shift, two and three shifts operate. All these factors combined have made necessary card stoppages for color changes and maintenance repairs. To cut such shutdowns to the bone should be the aim of every overseer.

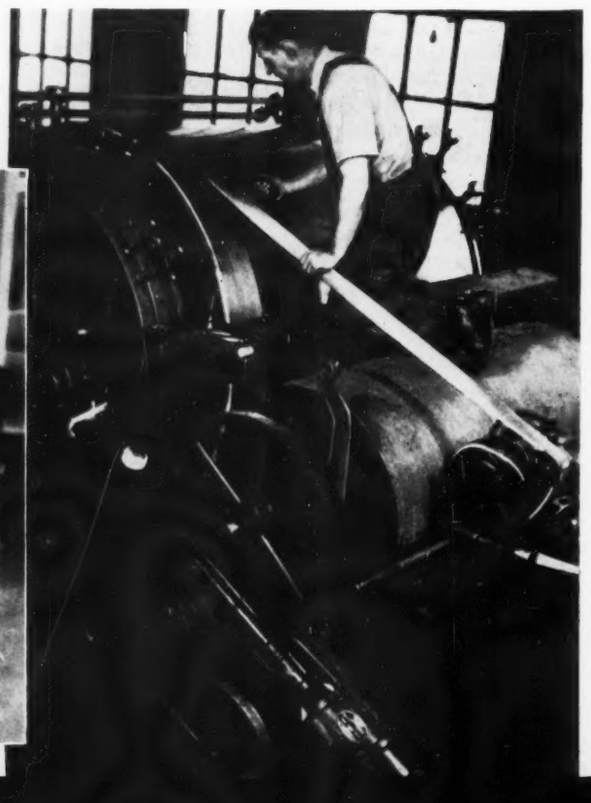
Standardization should be applied wherever possible. There is no reason why definite cylinder, doffer, fancy, worker, stripper, and eccentric-shaft speeds cannot be established and maintained. It has been found that high speed does not necessarily mean more production. What counts is how much of the card-room production is spun into good yarn. One may be able to increase production by stepping up speeds of cylinders and condensers, but there is a point beyond which increases in speed will produce inferior work. A series of tests should enable most mills to establish standard speeds. The endeavor should be always to maintain these standards, once they are set.

Standardization can also be applied to machine parts. If all cards are standardized, it will eliminate the necessity of maintaining a large supply of parts varying in size and type. The advantages of interchangeable parts is fairly obvious; it makes unnecessary loading the stock room up with slow moving parts, which means increased overhead. Failure to have proper repair parts on hand when a major break occurs causes unnecessary card stoppage. A control should be established so that some one person is responsible for ordering parts. We use the crib stores system, keeping a given number of each type of part on hand; the number depending on the quantity of requisitions against each part.

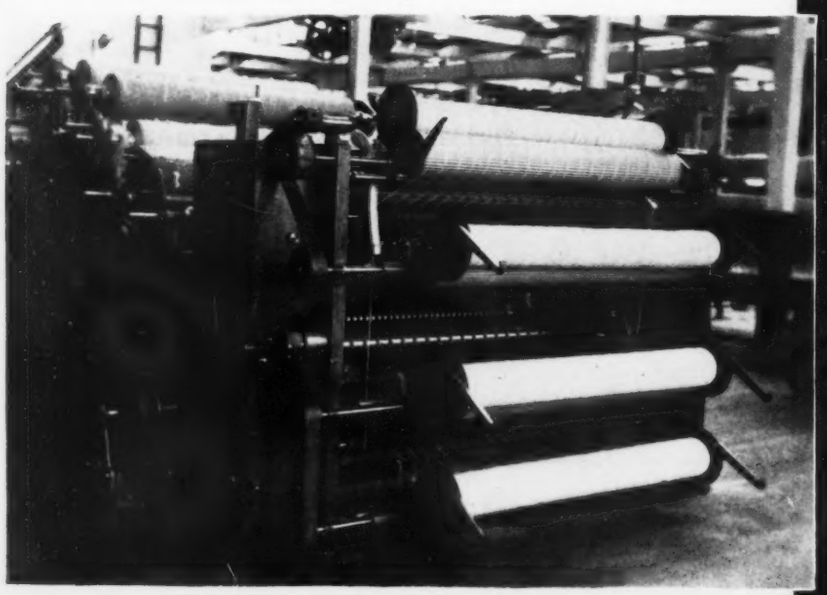
We require that replacement parts for repairs be authorized by the head carder. That is, if a card requires minor adjustments, the fixer may go ahead and make them. But, if repair parts are necessary, he must consult the room foreman. This places the responsibility directly on the foreman, eliminates "buck-passing," and gives assurance that repairs are not haphazard.

Independent of fixers, we maintain a machine overhauling and grinding crew. This group is under the direction of a competent card mechanic. At regular intervals, each card is stopped for a period of one week and given a thorough going over. Often a possible major break-down is foreseen by these men, the proper remedy applied, and future trouble prevented. All clothing is well

Winding card fillet by driving winch with portable power drive—a time and labor saver



This up-to-date tape condenser woolen card produces up to 15% more good roving than older models



Four workers or strippers can be ground simultaneously on this machine, thus cutting down stopping time for grinding

inspected, and if any fillet requires changing, it is replaced. Condensers are overhauled, rub aprons that are thinned out are changed, worn apron rolls and bearings are replaced. When a card has been reset, it is as good as new.

Much stoppage time can be reduced by carrying on hand several clothed workers and strippers, tumblers, fancies, feed rolls, and an upper and lower ring doffer (where these are in use). If trouble should occur, the standbys are immediately placed in position and operation is resumed. The damaged parts are then taken to the repair shop to be put in proper shape.

Grinding time can be minimized by having enough grinding equipment so that all workers and strippers can be completely ground in the same period of time required for cylinder grinding.

POWER-TRANSMISSION maintenance is the function of the general plant maintenance department. Care and upkeep of motors and other electrical equipment are possibly more important in the card room than any other department of the mill, because of flyings and the dusty condition of the room. The tendency is for wool to bind in bearings and suck all the oil out, causing bearings to overheat and freeze. A daily inspection is made of each card room motor in our plant; at this time oil cups are filled and motors checked for possible trouble. These inspections enable one to discover difficulties before a motor actually fails. If there is an improper condition, the inspector reports it to the electrician, who in turn sends a man to check the motor. This is done during the lunch period, when the card room is stopped. All our card-room motors are equipped with special screen guards further to prevent admission of any foreign matter. Every year, during vacation shut-down week, all motors are taken down, thoroughly inspected, cleaned, revarnished, rotor and windings checked, and bearings changed if required.

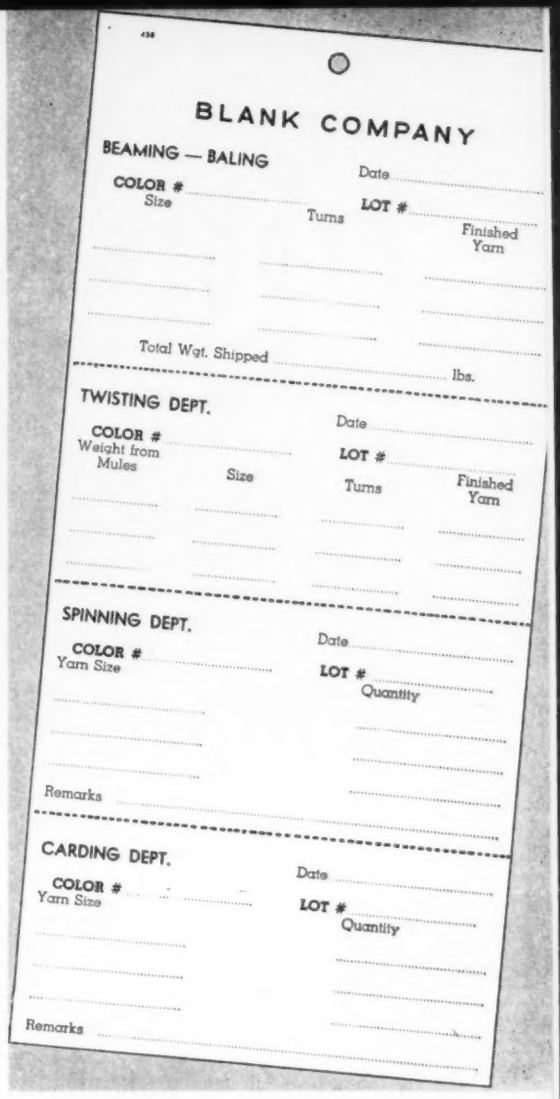
We also save time by use of vacuum-stripping equipment. This will be appreciated by those who have stock-dyed problems. Vacuum stripping so cleanses colors from cards that the following color can be immediately started on production after having made only a single set of waste speeds. This method we find much faster than hand stripping, thus enabling more cards to be stripped per day. Also, less waste is made between color lots.

We supplement vacuum stripping with hand stripping, which is done on the third shift. The hand stripping removes any shives and burrs that have not already been taken out. Every card receives one or more strippings each day.

It might be said at this point that card-room operatives should be taught cleanliness. Care of cards requires frequent cleaning and oiling. The machines should be wiped down with a piece of waste every night and flyings removed; waste on the floor should be gathered up at intervals throughout the day.

Cards should be properly oiled before every operating period. Some mills leave the oiling up to the individual, to be done before the shift starts. Under such a set-up, unless they are watched closely, most operatives care little as to how they oil. We allow our help 10 min. for oiling, with pay, before every shift. Since they are being paid, the workers feel that it is part of the job, and make oiling a careful routine.

Card rooms should have humidification, to permit smooth running of the wool. The ideal set-up, probably, would be complete isolation from outside air, and an air-conditioning system within the plant. The next best thing is to humidify the atmosphere by using some sort of atomizer system. Humidification should be supplemented by temperature control. With definite control of humidity and temperature, the room can be kept relatively uniform throughout the year. Static electricity on cards can be practically eliminated.



This production card, about 5x10 in., coordinates work of various departments and helps prevent delays.

Never keep cards waiting for work. It is up to the preparatory department to see that colors are properly prepared and sent to the card room in time to follow the foregoing lot.

We have given up the old method of verbal instructions as to what specifications are to be used on each lot, and have installed a production card system in its place. This card is attached to each lot when received at the picker house from the dyehouse. It contains all necessary instructions for carding, spinning, twisting, finishing, and shipping departments. It coordinates production between departments, preventing delays due to lack of instructions.

An efficiently operated foremen's or overseer's organization will also be found of assistance in promoting maximum production and minimum stoppage.

Progress in Mercerization

On 50th anniversary of Lowe's patent trend is to higher speed, better control

By CHAS. F. GOLDTHWAIT

THE MERCERIZATION PROCESS was first patented 90 years ago, but the one feature which has made it really successful, the development of luster, was not recognized until long afterwards. It was not until 1896 that mercerization as we now know it became a commercial process in Germany and England, and about a year later in this country.

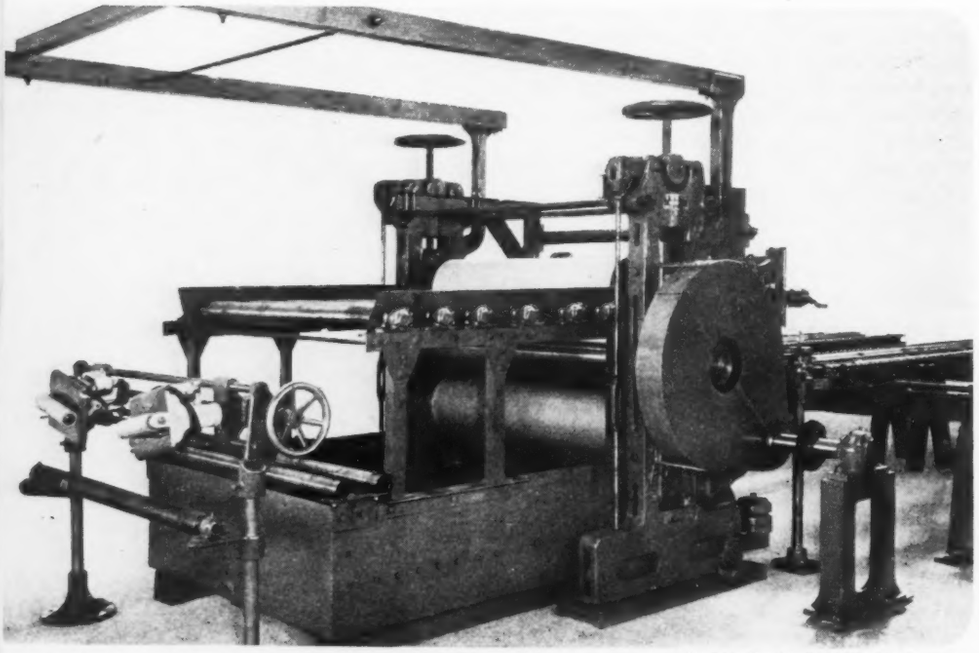
The outstanding name in the commercial development is that of Horace Lowe, an English "technical chemist," who first recognized luster and patented a method for producing it. Although he seems to have practically missed the best part of his invention until it was brought out by others, the facts remain that he had the basic patents as recognized by the courts, and that the (British) Society of Dyers & Colourists awarded Lowe its highest honor in 1921, "for the production of permanent luster in cotton," like "the luster and beauty of the finest of silks."

The word mercerization is somewhat of a misnomer for the present process, because John Mercer, for whom it was named, apparently never heard of luster. This fine, permanent finish was only discovered long after his death and, if he had known of it, he could not have done much mercerizing because there was no cheap commercial caustic in his day.

In his original process, Mercer shrunk his cotton and emphasized the making of a closed or "fulled" fabric. Such a product has distinctive dyeing and other properties and represents virtually a new fiber, different from the original cotton and from conventional mercerized cotton. Material treated in this way ought to find more uses in yarn or in knitted or woven fabrics but a great disadvantage is the loss of length of yarn or area of cloth, necessitating the spinning of finer counts than appear in the finished product, a considerable item of cost. Lowe himself was trying to overcome this difficulty by opposing shrinkage with tension when he made his momentous observation that sufficient tension or restraint on the cotton produced luster.

Until Lowe's extensive study resulted in his first patent in 1889 there was little development of mercerization outside of "caustic crepes," where stripes or areas printed with caustic were allowed to shrink to produce the crepe effect.

Lowe almost had luster in this first patent, which is the first record of luster by mercerization, although it was not specifically claimed as a part of the invention. His really basic patent in 1890 described such methods as have been used ever since to produce luster and again described the product as having a more glossy appearance. In fact, he described about everything that a mercerizer can do to produce luster, but he was evidently not thinking of it as a major result of his invention, because it is not emphasized in the specification nor mentioned in the claims.



Courtesy Textile-Finishing Machinery Co.

Padder section of modern piece-goods mercerizing machine

THE IMPORTANCE of Lowe's method was not immediately perceived and there is a record that the first commercial product seen in England was brought in 1896 from Germany, where Thomas and Prevost, French dyers, were located at the time in Crefeld. They rediscovered the luster process, saw its possibilities, and obtained patents for producing a "magnificent silky gloss," but the patents turned out to be almost identical with Lowe's. Efforts were made by licensees of Thomas and Prevost, in one of the classical lawsuits of the textile industry, to uphold their patents over Lowe, but they were declared invalid. Since Lowe had no patent in this country, the process became free to all.

Curiously, there is no form of the term "mercerized" in either of the complete specifications of Lowe's patents, but it was used by Thomas and Prevost.

Mercerization is a prize example in the textile industry of research in pure science, undertaken without any practical or commercial objective, but which resulted in a process of outstanding value. John Mercer was working on a theory of solution quite apart from any thought of a textile finish, but when as a step in that work, he tried filtering some caustic soda solution through cotton cloth, he saw a possibility beyond the fact that the cloth shrunk and puckered and (probably) stopped fil-

tering. He followed up this new idea and it resulted in his first patent.

Although Mercer laid the foundation for mercerization, there was but limited use of his methods for the next fifty years. Then Horace Lowe made an intelligent and extensive research for the definite purpose of making Mercer's processes more practical. Lowe's modifications of the process resulted in luster, the main objective of present day mercerizing, although it was but incidental to what he had in mind. Thus the feature which has proved most valuable of all was also an accident, a byproduct of preventing shrinkage while trying to improve on the original process.

Then Thomas and Prevost saw the commercial possibilities of this new process of obtaining luster. From that time it aroused intense interest and developed rapidly in the hands of mercerizers, chemists, engineers, and machine manufacturers.

Thus the insignificant byproduct of a scientific study developed into the most successful of permanent cotton finishes and has given added value, as well as luster, to hundreds of millions of pounds of yarn and many billions of yards of cloth. Mercerization is one of the strongest of arguments for fundamental scientific research in the fields underlying the textile industry.

PRESENT-DAY METHODS. About 45,000,000 lb. of yarn and 800,000,000 yd. of cloth are mercerized each year in the United States, approximately the same quantities as a decade ago. In other words, mercerization as a whole appears to be a reasonably stable branch of the textile industry in spite of the inroads of competing fibers.

One can hardly describe a "best" method of mercerizing, because the process varies so much with conditions. There is perhaps the greatest variety in handling pieces, which may be mercerized in the gray, boiled, or full-bleached form; and entered into the caustic wet or dry.

They may be mercerized through padders and tenters, sometimes with two separate padders and perhaps with idling drums between, so that the goods can be stretched a little by a difference in speeds of the padders. There may also be expanders in the system, as used in a chainless machine, before the cloth enters the tenter.

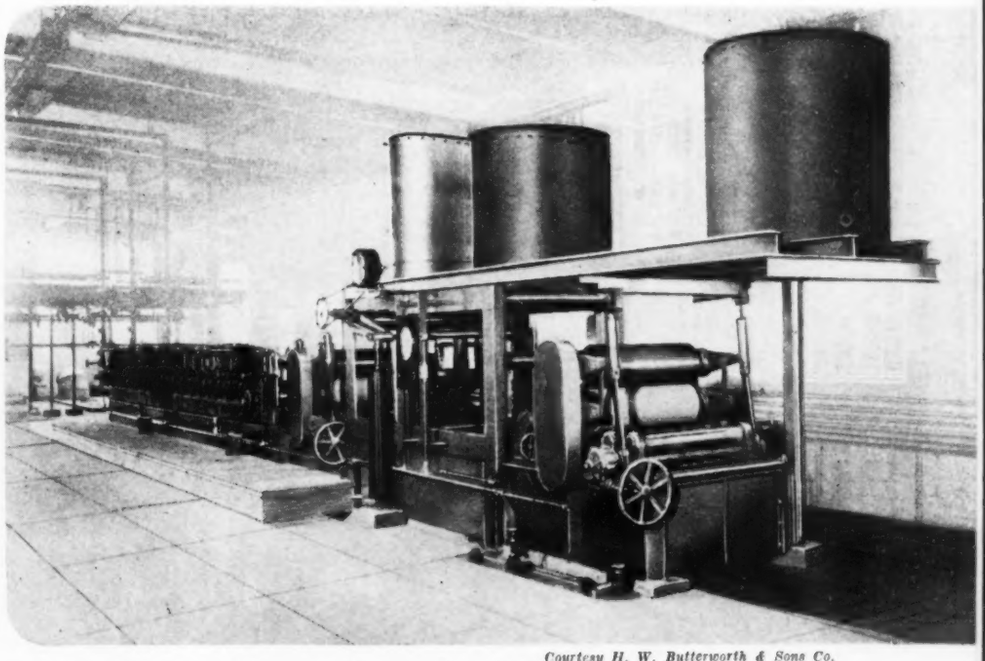
Many mercerizers have methods for running wet piece goods and claim advantages in penetration and luster, although entering dry has been more generally practiced. There is a double chain-clip for running two pieces of cloth at once in a tenter. The main advance has been in uniformity and in the increased production per machine.

A very different type of mercerizing machine for piece goods, the chainless machine, has been used for some years in Europe, although not so extensively here. It occupies less floor space, but its other advantages are still somewhat controversial, probably because each type of machine has a field where it is best, and the fields overlap to some extent. Cloth enters the chainless machine through some padder arrangement and is then stretched and held at width by a series of expanders, instead of a tenter. Sometimes two ends can be run at once—one piece superimposed on the other.

Large amounts of yarn are still mercerized in the skein, but mostly in small or odd lots, or for special purposes. Yarn can be conveniently shrunk and stretched by this method. Ingenious automatic controls have been devised; but skein mercerizing is at best a relatively slow, intermittent process.

cool the caustic has been dropped. Caustic recovery methods have been improved and more widely introduced. There has been a step-up in speed and a general tightening of control. Mercerizing machinery is still being developed and improved; but, in spite of all this, Lowe came surprisingly close 50 years ago to describing our present-day methods.

There has been a vast amount of scientific study of mercerization during the last 50 years, but we are not entirely sure yet what happens to cotton when it undergoes this process. Undoubtedly the chemical substance known as alkali cellulose is formed during ordinary mercerization. A doubt as to the importance of this alkali cellulose to mercerization seems justified by the fact that similar effects are obtained with certain concentrated acids and neutral salts. The swelling of the fiber brought about by these various reagents, rather than any specific chemical effect, seems to be the real



Courtesy H. W. Butterworth & Sons Co.

Up-to-date warp mercerizing machine installed in southern plant

THE CONTINUOUS warp process does the bulk of the work on yarn and is well enough standardized so that a group of manufacturers sell their product under a common trade name, Durene, representing warp-mercerized combed two-ply cotton yarn.

All the steps from wetting-out to drying are usually carried out continuously, with the yarn fairly near to constant normal length. There have been gradual improvements in drying and in other details to improve quality, particularly by eliminating tiger stripes.

Speaking generally, refrigeration to

cause of mercerization of the cotton.

However, as a consequence of study by the relatively new X-ray methods, several compounds of cellulose with caustic soda have been reported, and at least one research worker (Schramek) assigns the chemical "transformation" a great importance in mercerizing. The assertion is made that the increases in dyeing capacity, fiber strength, and luster all depend upon the chemical transformation of cellulose into the so-called hydrate form, by which is apparently meant regenerated alkali-cellulose.

FIXING HOSIERY MACHINES

FULL-FASHIONED MACHINES—Chap. III. (cont'd.) Stitch-regulating

By WALTER A. SIMOND

IN ORDER TO HAVE the presser and regulating mechanism relay smoothly and uniformly throughout the entire length of the knitting machine, it is necessary to gage both carefully in setting them in their relation to each other. As has already been stated, the presser mechanism is gaged between the presser cams and cam rollers.

The following procedure for checking the regulating motion setting or for adjusting the regulating motion when erecting a new machine is abstracted from the February, 1934, issue of the *Reading Record, Knitting Machine Lectures of Wyomissing Polytechnic Institute*, and the *Yarn Carrier:*

"1. After equalizing the presser rollers, put the proper steel block between the roller and the cam at each presser lever. Put the springs on to hold the blocks in place.

"2. Run the indexing disk screw (micrometer adjusting screw), 1, (Fig. F5) into the spindle until the outer edge of disk is flush with the plunger. 2.

"3. After connecting regulating-motion spring, 3, pull regulating throttle, 4, up until it is at the center of its travel. With regulating motion in this position and the presser rollers on the round halves of their cams, set stud, 3 (Fig. F6) in the center of the spline milled slot of lever, 2, and then tighten the lever, 2, on the regulating shaft with the stud, 3, tight against the flat of the cam lever, 1. When all the regulating levers, 2, have been set and tightened on the regulating shaft, pull the regulating throttle, or slacker lever, up two notches so the blocks will drop from between the presser rollers and their cams.

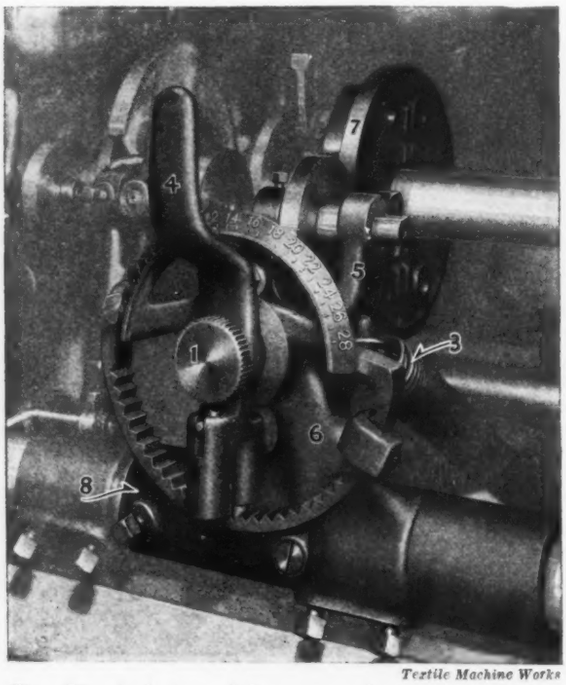
"4. Leaving the regulating throttle in this position, use one of the presser gage blocks and set each stud, 3, separately to give this distance between the roller and the cam.

"5. After all presser levers with rollers have been set, turn the machine until the needles are in their highest position, then set the presser levers that do not have rollers by using gage No. 1186, which will give the correct distance between the bottom of the needle and the front bed. Next tighten the levers on the presser shaft.

"6. Make a complete check of all needle bars for correct setting with gages Nos. 1186 and 1197. This adjustment must be absolutely correct.

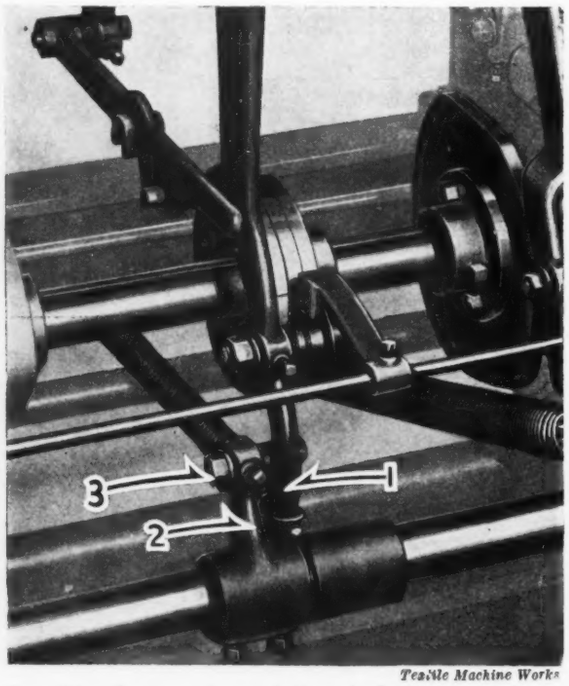
"The needles may be moved to or from the presser edge to form the desired length of loop by moving the regulating throttle or 'slacker,' which turns the spindle and thereby forces the adjusting arm outward when lengthening the loops or permits it to be moved inward when shortening the loops. The pitch of this spindle is ½ in.; therefore a slight movement of the throttle will cause a considerable movement to be given to the regulating shaft. The inside of the spindle is threaded to receive the adjusting screw, the purpose of which is to obtain the proper initial setting of the regulating motion when the machine is being erected. By changing the position of the regulating throttle one notch, the number of courses per inch will be increased or decreased about one.

"Micrometer adjustment is made possible by use of the auxiliary screw, 1, (Fig. F5) incorporated in the adjusting spindle having a ratio of



Textile Machine Works

Fig. F5. Indexing disk screw, plunger, regulating motion spring, and pall-regulating throttle



Textile Machine Works

Fig. F6. Cam and regulating-shaft levers and set stud

approximately 4 to 1 with the main spindle; that is, movement caused by one notch on the main spindle dial is equivalent to that caused by four notches on the small dial.

"The movement of the needles away from the presser edge, the purpose of which is to provide the necessary slack for forming the divider loops, is produced by the regulating cam. This cam is eased off at the point where the dividers move forward. The slope of the regulating cam at the place mentioned above causes this movement of the needles away from the presser edge; consequently no matter what setting the needles have while the thread is being laid and sunk, this slope of the cam will always cause the needles to make the same movement away from the presser edge.

"After the catchbar has moved the dividers forward and stretched the loops to their proper form and shape, the regulating cam is eased off a little more, permitting the needles to make a further movement away from the presser edge, thereby decreasing the tension on the loops and decreasing the friction between the backs of the sinkers and dividers and the back face of the groove in the catchbar. The catchbar will then be able to move down by means of its own weight and engage the backs of the sinkers without difficulty."

Because of the necessity for rapid regulation and variation of the stitch when the yarns are changed in the construction of the stockings, it is possible to have only one cam, or at the most two, for this important duty. Therefore these cams should be inspected periodically, and, if one of the cams shows uneven wear, both cams of machines having two should have the working surfaces refinished to the same radius, and to the original form of rearward slope; and be reset to the point where the rearward slope begins. By running on to a slack course cam, removing the stitch lever springs, turning the machine to a cam gage setting at the end of the stitch cam circle before removing the stitch cams, and then removing and refinishing them, they can be returned to the original setting easily. Refinishing for a single-cam machine should be done in the same manner. Any irregularity in the stitch cam surface will be transmitted directly to the needles, for every course in the fabric.

In setting the stitch-regulating cam rollers alike, it is recommended that the rollers be separated from the cams by running on to a slack-course cam far enough to permit use of a feeler gage between the rollers and cams.

CIRCULAR MACHINES—Chapter V. Replacing Needles

By JULIAN W. HUGHES

A LARGER PERCENTAGE of the fixer's time probably is devoted to replacing latch needles than to any other one phase of circular hosiery machine maintenance. Anything which can be done toward minimizing needle replacements will, of course, help to reduce maintenance costs. Due to normal wear, some needles will need to be replaced every day; otherwise the quality of the hosiery will suffer. Various local conditions, such as the number of needles in the cylinder and type of hosiery being knitted, determine the number of replacements which constitutes a reasonable amount. A fair average on medium-gage hosiery is one new needle for every 2 doz. pr. of half hose or 1 doz. pr. of women's stockings.

Of the innumerable causes for abnormally high consumption of needles, the most common are: (1) incorrect settings, (2) poor alignment of needles, (3) improper transferring of the ribbed top from the transfer ring, (4) smashes due to careless handling of the machines by knitters or fixers, and (5) grit adhering to greasy cylinder walls. Casual examination of each needle as it is removed from the cylinder will often reveal the exact cause to the fixer, and enable him to take prompt steps to correct the condition which is necessitating the excessive replacements. Many well-managed mills have a rule that a discarded needle must be turned in to the supply room for every new needle issued. This system is much better than the practice followed in some mills of merely dropping the needles on the floor to be swept up, and its psychological effect is to prevent unnecessary replacements.

When inserting new needles into the grooves, the fixer should make certain that the stems are bent or flexed sufficiently to give them stability. On the other hand, if the stems are flexed excessively, the needles will work in their grooves with too much friction and will wear out prematurely.

On ribbers, too much tension on the take-up rolls is likely to occur when the dial is set high and the fabric is being knit loose; this will result in too many hooks breaking off the needles, especially with the finger gages. Stitch cams which have been allowed to become loose or which have nicked faces will bend and break the butts of needles.

Topper-knitters and learners are often hard on needles because of their hurried and rough methods of transferring. Some experienced knitters can slap on the transfer and give it a twist as they take the ring from the needle hooks, while learners are likely to push down on the ring before the transfer points have properly engaged the needles. For that reason, some mills have those experienced operatives who have developed a delicate touch do all the transferring and actual knitting, while the less skillful workers devote their entire time to topping. They have found that this method not only reduces needle replacements, but also results in more uniform knitting.

On Model K machines, to secure conditions for proper transferring and the avoidance of unnecessary needle breakage, Scott & Williams, Inc., recommends that the dial be set to such a height that a needle butt from the machine can be inserted between the transfer bits and the tops of the sinkers when the loops are being transferred.

On half-hose machines equipped with dials and the make-up system, for transferring the hook and cast-off loops to the needles on half-hose machines, a hook and cast-off jack press lightly against the jackless needle as it rises to receive the loop. If the dial is advanced just a little too far when the fixer is setting the jacks close enough to transfer the loops to the rising needles, undue wear on the needles will result. The needles must touch the jacks in order to pass through the loops, but they should touch as lightly as possible.

Worn needle grooves and loose needle walls will throw the needles out of alignment and cause bent latches or rolled hooks through improper contacts with the latch opener or throat plate. The remedy is obvious.

A smash is likely to result if the pattern chain is racked at the wrong time. Some operatives can rack the pattern chain while the machine is running, but the safest way is always to do this when the machine is not running.

For Determining Yarn Diameters

An easily built device will be useful in knitting mills and weaving plants

By J. F. CAHILL

COTTON YARN DIAMETERS have been studied for many years. Much has been written; many methods of determination have been employed; many formulas have been evolved. From the viewpoint of the weaver, it all boils down to an effort to find an accurate means by which the maximum possible number of ends or picks per inch of any yarn can be calculated.

From the viewpoint of the knitter, on the other hand, it boils down to an effort to find a reasonably accurate means by which, given a specific yarn number, the width and weight per square yard of a fabric made from that yarn can be precalculated; or, given a specific fabric, the number of the yarn and the conditions required for making the fabric can be predetermined.

The methods most used in determining diameters are microscopic measurement of longitudinal and cross-sectional views and micrometer measurement. These methods do not take into consideration the changes in yarn shape and diameter that occur in the process of its incorporation into a fabric, woven or knitted. In woven goods, yarns are subjected to forces which flatten them; cross-sections become elliptical in shape and the major, or long, axis of the ellipse is the "diameter" in which fabric designers are most interested. This means that under working conditions the diameter is larger than when the yarn is under no strain or pressure. In knitting, especially circular knitting, the yarn is flattened against the needles; but, as the loop is cast off, a lengthwise strain tends to restore the cylindrical shape. This suggests that perhaps different formulas are needed for calculating yarn diameters for weaving and knitting.

Both micrometer and microscopic measurements are made on short lengths (3/16 in. or less) of yarn. Such being the case, a great many measurements are necessary in order to get a fair average. In measuring diameters of cross-sections, use of a number of sections from one or more strands offers an opportunity more easily to obtain a true average.

A method of determining yarn diameters which is described in a well-known textbook on knitting is to coil yarn around a watch chain for ½ in. and, from the number of coils, to calculate the possible strands per inch and the yarn diameter. Here, too, it is evident that ½ in. of coils is not sufficient to obtain a true average. As a simpler and more effective way of winding and counting coils, the device illustrated in Fig. 1 is presented. The device is simple in construction and can easily be made without any elaborate machine work. The only part that requires careful work is the coil compressor *B* shown in Fig. 1 and shown in detail in Fig. 2. *B* is loose on shaft *A*, and carries pointer *C*. The face of *B* is tapered slightly more than halfway around, and contains a notch, *D*.

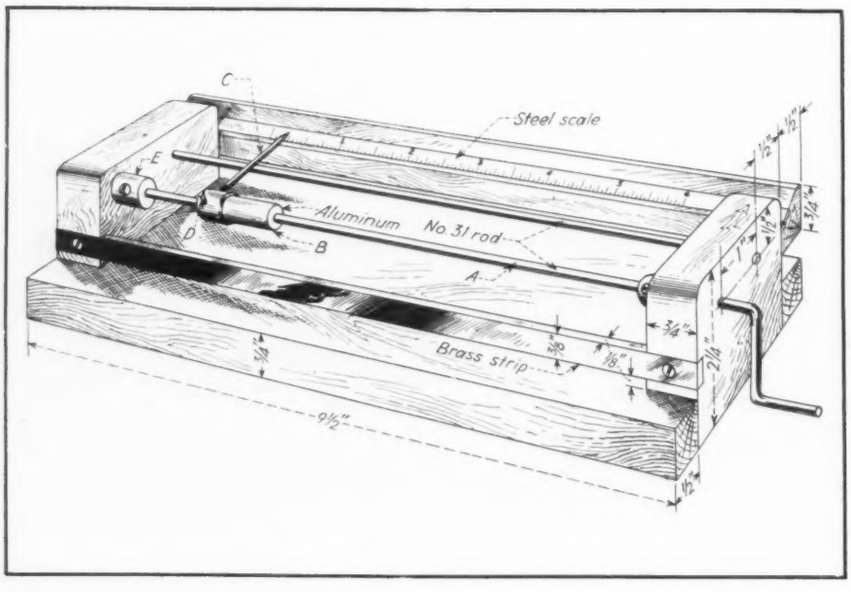


Fig. 1. Homemade yarn coiler for use in calculating yarn diameters

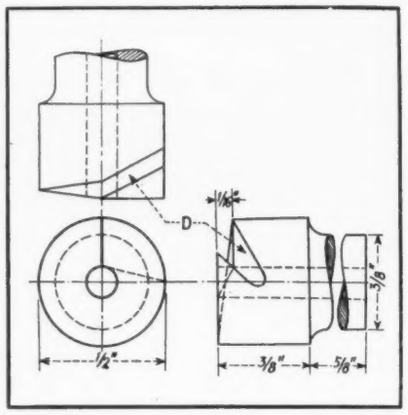


Fig. 2. Detail of construction of coil compressor

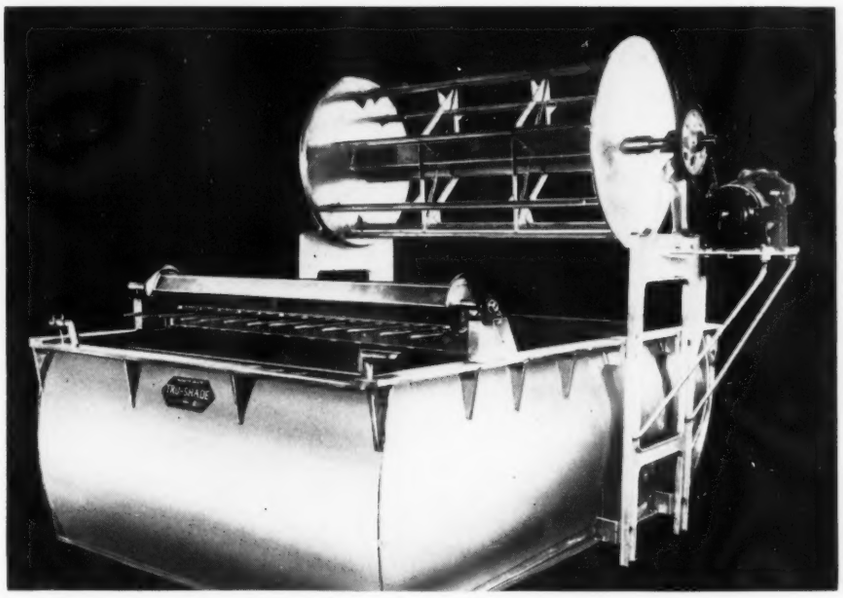
TO USE THE DEVICE in determining yarn diameters, push *B* to the left until it touches the collar *E* and pointer *C* is at 0 on the scale. Feed the end of yarn through notch *D*. When the crank is turned, the sloped face of *B* guides the yarn into closely laid coils; the sloped face also acts as a cam surface and its pressure on the yarn forces *B* to slide to the right, moving the pointer along the scale. The coils are counted by counting crank revolutions as the winding takes place. Usually 4 in. of coils will be sufficient to obtain a fair average. With low-count yarns, however, it is better to wind 5 or even 6 in. of coils. To obtain usable figures, Total coil ÷ Inches = number of ends of the yarn that can be laid side by side in one inch, or Inches ÷ Total coils = Yarn diameter in inches.

A refinement that can easily be made consists of adding a counting device to the crank. There are likely to be occasional errors if counting is done by the "human" method.

TEXTILE EQUIPMENT NEWS

Dye Beck with Curved Sides

What is said to be the first dye beck with fully curved sides ever to be built, was recently announced by Rodney Hunt Machine Co., Orange, Mass. Among advantages claimed are added strength and permanence, at less cost. Sides, it is stated, are pre-formed for the correct pressure curve when filled with dye liquor. This is said to eliminate flexing of sides when the tub is being filled or emptied, and to make the tub stronger and more rigid, without the use of heavy bracing.



Dye beck with curved sides (Rodney Hunt)

Saco-Lowell Improvements

Recent machinery improvements announced by Saco-Lowell Shops, 60 Batterymarch St., Boston, include:

A spring-actuated full-bobbin knock-off for roving frames. The new assembly, composed of only three studs, one lever, and a spring, replaces the old assembly consisting of five studs, five levers, and a weight, and is said to work faster and more smoothly and to be applicable to all existing Saco-Lowell frames except those equipped with the type "N" stop motion. It is stated that the new mechanism eliminates the time lag due to inertia of the weight and friction of the studs.

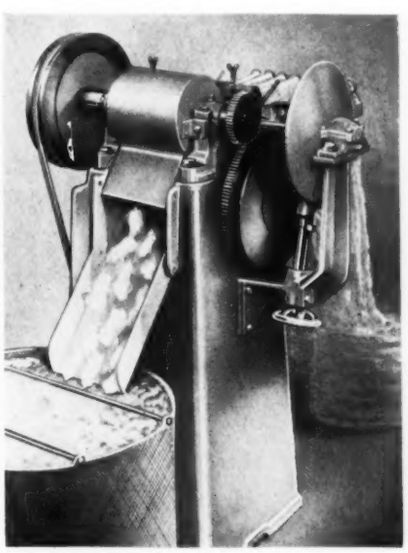
A new four-roll draw box for combers is designed to accommodate staples from $\frac{1}{8}$ to 2 in. and to allow waste removal of from 3 to 25%; gear assemblies allow drafts ranging from 665 to 1227. A system of spring-weighting top rolls is extremely accurate and allows roll pressures of 30 to 55 lb., it is stated. Also, a transparent extension on the clearer assembly enables the operative to inspect the web without raising the clearer cover. The new draw box is said to be applicable to all existing Saco-Lowell combers.

A twin-disk starting clutch for motor driven roving frames is said to duplicate the smooth, easy starting qualities of a belt drive.

The disk assembly on the lap winder of the control draft drawing system has been redesigned to insure true running heads and, should it be necessary, to permit the assembly to be taken down at the mill. The assembly can be installed on machines now in use. On the drawing frame a new drive for the oscillating shaft of the stop motion is said to maintain a constant number of strokes per minute regardless of draft gear used, and to increase the accuracy and sensitivity of the motion by increasing the oscillating speed.

A new spring-weighting system for spinning rolls is thought to be an improvement over previous assemblies of both the spring and dead weight types. It is stated that springs used are uniform, long-lived, and fatigue-proof, and that it is possible always to maintain a predetermined pressure per square inch of roller length. The assembly can be adapted to existing frames of Saco-Lowell make.

The double-beam head-end for Saco-Lowell slashers has been redesigned to accommodate two loom beams of 24 in. head diameter. An improvement in the press roll assembly is said to insure perfect alignment of roll and beam at all times.



Rotary fiber cutter (Butterworth)

Rotary Fiber Cutter

In cutting fiber materials, such as rayon, silk, cotton, wool, flax, jute, and others, into uniform lengths for mixed spinning, flock and special processes, the Universal Rotary Fiber Cutter recently announced by H. W. Butterworth & Sons, 2417 E. York St., Philadelphia, is said to be achieving record poundage. Production in pounds per hour depends on weight of material and length of cut, but it is maintained that an output of 750 to 1,000 lb. per hr. of $1\frac{1}{2}$ in. rayon has been attained.

The machine is designed to give a range of from 1/32 to 8 in. and to maintain accurate and uniform cut lengths. Adjustments can be made by a handwheel while the machine is running and require no change of gears or special attachments.

Cuts per minute, as announced by the manufacturer, are given in four

ranges. On 4- to 8-in. cuts, 500 cuts per min.; on 2- to 4-in. cuts, 1,500 cuts per min.; on $\frac{3}{16}$- to 2-in. cuts, 3,000 cuts per min.; and on cuts less than $\frac{3}{16}$ in., approximately 15,000 cuts per min.

The cutter is ball-bearing equipped throughout, and is designed so that knives can easily and accurately be adjusted after resharpening.

Loading Nylon hosiery in presetting machine (Paramount)

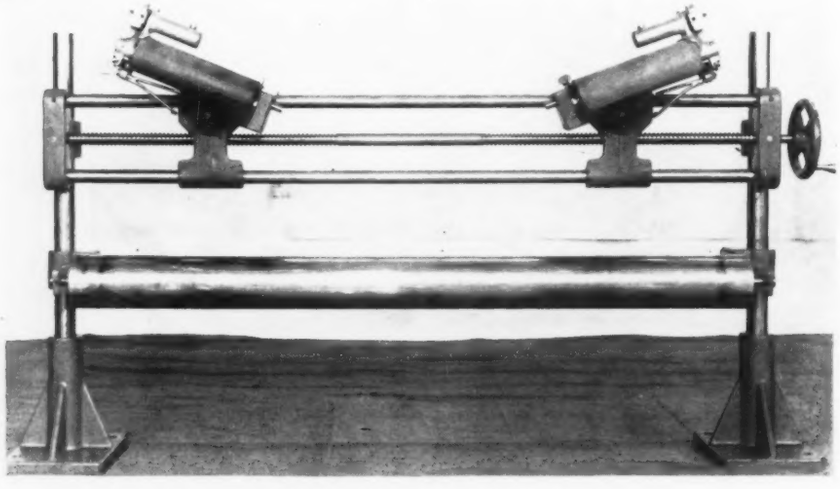
Floor Finish

Development of a new compound for treating mill floors has been announced recently by E. I. du Pont de Nemours & Co., Inc., Wilmington, Del. This material, known as Penetrating Floor Finish, is said to be suitable for treating either new or old floors. Its action is to penetrate the surface, harden the wood, and seal the pores, thus holding oil and dirt on the surface, from which it can readily be removed by a brush, broom, or dry mop. Among the advantages cited for the new compound are that its use aids in keeping floors clean and sanitary with a minimum of scrubbing with soap and water.

Cloth Guider and Opener

For guiding cloth into various machines, such as mangles, tenters, drying cans, calenders, singers, open soapers, and agers, Mount Hope Finishing Co., North Dighton, Mass., has recently placed on the market a mechanical guider. This type of guider was originally developed in France, but was redesigned by Mount Hope Finishing Co. for its own use. Results obtained were so satisfactory that it was decided to make them available to other finishers. It is stated that the guider is equally effective for heavy or light fabrics and for opening cloth from rope form or for guiding fabrics in the open width.

The guider consists of a pair of heads so mounted that one head operates on one selvage, and the second head operates on the other selvage as the cloth passes vertically downward through the guider. Each head consists of a rubber-covered roll spring pressed at all times against a stainless-steel roll. This pair of small nip rolls is supported from a frame that is pivoted in such a way that the angle they make with the cloth travel changes automatically to suit requirements. The more the outer ends of the nip rolls tip down below the horizontal, the quicker they pull the cloth toward their side of the guider. A simple arrangement, without any additional moving parts, swings the nip rolls back upward as the selvage moves sidewise and then tips them downward again when the selvage starts to travel toward the outer end of the nip. The cloth is said to be continually under control at both selvages, but with no more control being exerted than is necessary for the particular conditions.



Cloth guider (Mount Hope)

The rubber covered nip roll is made of brass to avoid danger of rust spots. It is designed so that when the rubber roll is worn, after long service, a single nut can be removed and the roll reversed. The mating roll is made of stainless steel. Frames are made of a tough and durable aluminum alloy. Six grease-packed ball bearings in each head are protected by stainless-steel and aluminum shields to deflect water. Screws are either cadmium plated or made of stainless steel.

Pre-setting Nylon Hosiery

For finishing Nylon hosiery, a method and equipment for eliminating the preboarding operation have been announced by Paramount Textile Machinery Co., 538 S. Wells St., Chicago. In place of preboarding, the method utilizes a bulk presetting operation. With this system, the operative first loads 48 stocking-suspending units. With the same movement used for drawing the stocking from the inspection form, she drops the toe of each stocking on to a needle of a suspending unit which is held on an easily accessible stand. The units are constructed of non-rusting material, and the fine needle points are designed to enter between the loops of the stocking so that no injury to the fabric results.

Each needle unit holds 1 doz. stockings, and when loaded is held on the stand until a number of units are ready for processing. These are then transferred to the presetting cabinet, where they are hung on racks, moved into the chamber, and the door closed, after which a controlled water-vapor treatment is applied to the goods. At the conclusion of this treatment, the stockings are dried by hot air for a short period. Following presetting, the hosiery is dyed, then given a final setting under steam pressure in boarding equipment.

Elimination of the first boarding operation is said to carry with it several advantages. These include reduction of seconds, reduced handling of goods, lower finishing cost, easier removal of oil and grease spots, and easier mending. The single boarding method is being made available to Nylon processors under a licensing system.

Tape Tension Pulley

A new tape tension pulley introduced by Whitin Machine Works, Whitinsville, Mass., embodies shielded, prelubricated Fafnir ball bearings. The design is said to permit tape tensions to be reduced, yet more uniform spindle speeds to be achieved. It is maintained that tape life is increased and that stoppages for slipped tapes is eliminated. Double shields prevent lint from entering the bearing and also retain the lubricant. Lubrication is from a grease cup holding supply sufficient for a year's operation.

Tape Tension Pulley (Whitin)

Shuttleless Loom

Expected to be of wide interest to narrow fabric weavers is a new loom being introduced by Clutsom Machines, 250 West 54th St., New York. Principal features of the machine are a picking mechanism that requires no shuttles, bobbins, or cops, and a filling supply from cones placed at the rear of the machine. Substitution of eccentrics for cranks as a means of rocking the lay eliminates much vibration, provides a smoother action, and makes possible higher speeds, it is stated. Speeds as high as 280 picks per min. have been attained.

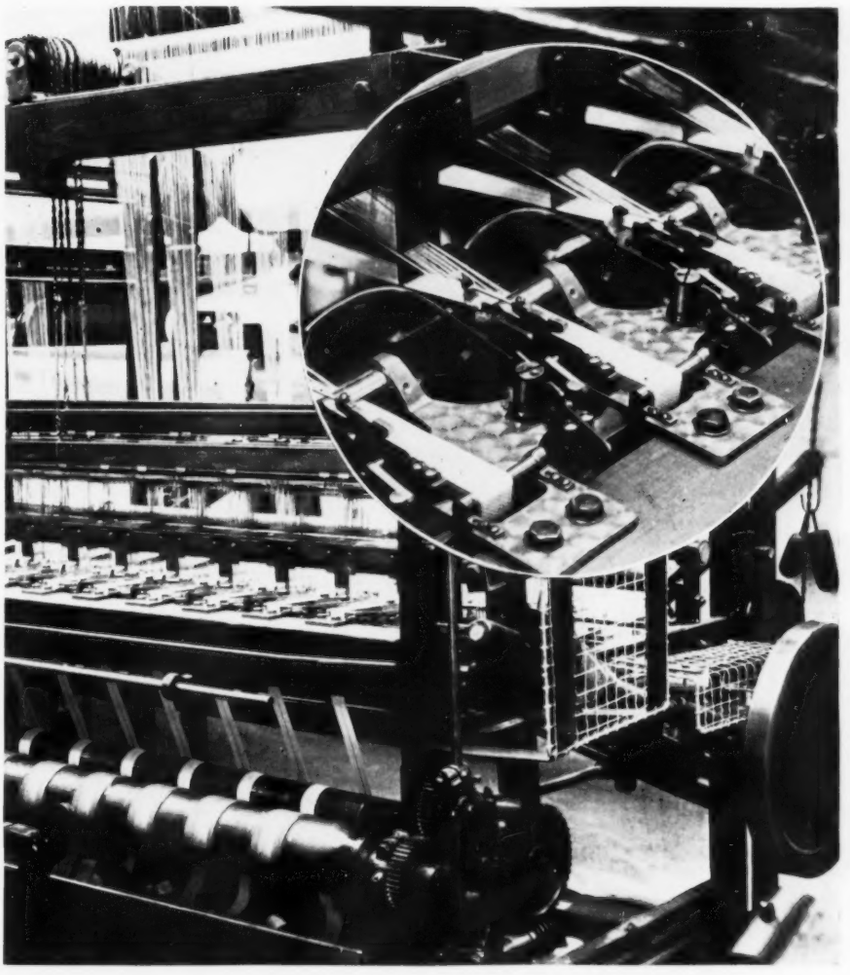
The loom weaves fabrics from $\frac{3}{4}$ to $\frac{7}{8}$ in. in width, and heads per loom range from 20 to 32, depending upon width of fabric. It is said that banking the heads in two rows, one over the other, makes it possible to double the heads per loom.

Either cam or dobby harness-motion can be used. An improved type backstand allows use of 5 warps.

It is said that power consumption is 1 hp.

The picking motion is cam actuated and is entirely positive. Filling is carried back and forth through the shed by a curved metal arm. The arm makes two trips through each shed, leaving two picks. When the arm has completed its first stroke, the filling is caught by a standard latch needle, as used in knitting, and is thus not pulled out by the return stroke of the arm. A motion of the needle interlocks the selvage loops by a knit stitch, making a ravel-proof selvage.

The filling yarn, held on cones at the rear of the machine, passes through a disk tension device in going to the picking arm. The advantages of this arrangement are cited as elimination of all preparation of filling except the placing of cones, and provision of a constant and uniform filling tension. Electric filling stop-motion is provided.



Shuttleless narrow fabric loom (Clutsom)

For Creasing Nylon Hosiery

A recently developed method and instrument for creasing and forming topping lines in Nylon or silk hosiery is being marketed by Claumac Co, Inc., Paducah, Ky., which organization has taken over the rights of Claussner Hosiery Co. and Propper-McCallum Hosiery.

The method consists, essentially, of applying heat to the boning opera-

Boning Nylon hosiery with electrically heated instrument (Claumac)

tion, in place of the conventional cold method. It is stated that application of heat permanently sets distortion of loops caused by pressure of the tool. This, it is claimed, gives an easily inserted and lasting boning line. A patent has been granted covering the principal of heat application to this operation.

Numerous advantages are cited, including improved quality and production, decreased topping line failures, and labor and overhead savings. It is said that with light pressure an operator can insert a lasting crease with one continuous stroke. The electrically heated boning instrument used can be connected to any ordinary a-c. or d-c. outlet.

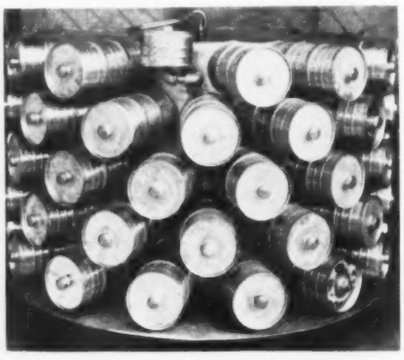
The method is being made available on a royalty basis. Instruments are sold to licensed mills as a supplement to the method; however, if they prefer, licensees may use any method of applying heat.

Renewable paper tubes for wooden bobbins (American Paper Tube)

Renewable Paper Tube for Wooden Bobbins

Decreases in expenses caused by replacement of rough, cut, or splintered wooden bobbins, without the necessity of changing over weaving and winding equipment, are said to be made possible by renewable paper tubes for wooden bobbins, a new product recently launched by American Paper Tube Co., Woonsocket, R. I. The paper tubes are fitted over wooden bobbins which have blank barrels turned to the correct size, and glued in place. They are said to give an exceptionally smooth corrugated surface, for free but controlled delivery of all types of yarn; resistance to chipping, splintering and roughing; and a degree of moisture resistance.

Long wearing quality is an advantage cited for the renewable tubes. However, when damaged or worn out, they can be cut off and replaced inexpensively. Wood bobbin blanks, for use with the paper tubes, can, it is stated, be supplied by most wooden bobbin manufacturers.



Carrier for rayon cake dyeing (American Obermaier)

Rayon Cake Dyeing Machine

For dyeing rayon yarns in cake form, a new machine has recently been announced by American Obermaier Corp., 355 Walton Ave., New York. A feature of the machine is the all-stainless-steel "porc-o-pine" carrier, which is shown in the accompanying illustration.

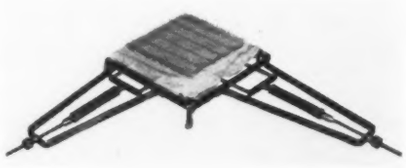
The new method, it is claimed, yields dyeings of superior evenness and retains the original quality of the rayon. Also, it is pointed out, the cost of skein winding is eliminated.

Knit Goods Shrinkage Tester

An apparatus and a test procedure for measuring the amount of tension necessary to restore knit fabrics to original measurements have been developed by United States Testing Co., Hoboken, N. J. The apparatus consists of a square metal frame containing movable needles, and two metal arms with tension gages. A sample which has been shrunk by a standardized laundry test is placed on the pins and pulled back to its original size, and the tension gages indicate the tension applied.

For making a test, an 8- to 10-in. square of fabric is taken. Approximately centered in the piece, two concentric squares, one 5 in. and the other 6 in., are drawn with indelible ink. The sample, thus marked, is slowly agitated for 15 min. in a jar containing 250 c.c. of 0.5% soap solution at 100° F., then rinsed, extracted for 3 min., and allowed to dry flat at room temperature.

The 6-in. square is placed on the needles of the frame; the arms are screwed out until the 5-in. square is back to its original size and the tensions registered on the scales are taken as final measurement of fabric shrinkage.



Knit goods shrinkage tester (United States Testing)

Useful Accessories for Textile Mills

Valves. Hancock Valve Division of Manning, Maxwell & Moore, Inc., Bridgeport, Conn., announces a new 600-lb. standard steel valve with seat Stellite-welded integral to body. Said to weigh from 1/3 to 1/2 less than comparable conventional design valves; body and bonnet of carbon-molybdenum steel give temperature rating of 950° F. at 600-lb. pressure; available in sizes 1/4 to 1 in.

Speed Variator. General Electric Co., Schenectady, N. Y., recently announced a speed variator designed to provide a wide range of speed by means of the generator-voltage-control scheme. Consists of adjustable-speed d-c. motor, adjustable voltage motor-generator set with control, and separately mounted generator-field rheostat; designed to operate from 3-phase, 60-cycle, 220-, 440- and 550-volt a-c. power; standard speed ranges available up to 16 to 1 ratio.

Another announcement of G.E. is of a portable hook-on volt-ammeter for measuring alternating current and voltage. Instrument is small and light and said to be accurate to within 3%.

Circuit Breaker and Starter. Cutler-Hammer, Inc., Milwaukee, Wis., has announced improvements in its Across-the-Line starter for polyphase squirrel-cage motors up to 5 hp. Simplified cover permits group-panel mounting with minimum clearance; operating mechanism easily removable for wiring; contacts made of heavier silver; lava insulators protect contact springs against heat transmission.

Also announced is a change in the

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AS NEAR AS YOUR TELEPHONE

For satisfactory Yarn Service . . . *when you need it,* call your nearest Dixie representative or the Dixie Mercerizing Company, Chattanooga. Phone Chattanooga 2-1151.

Because Dixie durene is available in a full range of counts, we have often been able to aid a mill operator who has been caught in a jam. • Dixie methods of "Controlled Manufacture" are rigid . . . so rigid in fact that we sacrifice more than 30% of the high grade cotton we buy, because it doesn't come up to Dixie standards. (*We believe that the more waste we have . . . the less waste you have.*) • This persistent adherence to high standard of quality . . . this constant maintenance of a full range of counts . . . this sincere desire on our part to serve you quickly can be expressed in a few words: We are not just selling yarn . . . *we are selling YARN SERVICE.* • When the "pressure's on" . . . call Dixie. You'll get quick service, and you'll get Dixie . . . durene at its best.

DIXIE MERCERIZING CO., Chattanooga, Tenn.

Dixie durene . . . a product of Controlled Manufacture

case construction of the Type MB Multi-Breaker assemblies, combining the construction of the insulated and grounded neutral. Inserting a screw in a tapped hole of the insulated neutral bar grounds the neutral and the case. Available with from 1 to 16 breakers which can be arranged for 2- or 3-pole solid neutral circuits for a-c. service; furnished in either flush or surface mounting types.

V-Belt, Non-Static. B. F. Goodrich Co., Akron, Ohio, has introduced a V-belt which is said to prevent accumulation of static and to retain its static-discharging qualities during its entire service life.

Electrical Equipment. Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., has introduced a line of circuit breakers for inclosure, panel board or switchboard mounting; rated 50, 70, 90 and 100 amp. at 250 and 600 volts a-c., 2 and 3 pole, and 125, 250 volts d-c.; adaptable to lighting and feeder circuits, and motor branch-circuit protection.

Also announced is a twin-lamp open-end fluorescent luminaire for general or supplementary continuous-strip lighting; utilizes two 40-watt, 48-in. fluorescent lamps; has white enameled-steel reflectors; twin ballast units and compensators are designed to give a power factor of 95 to 99%, minimize cyclic flicker, and assure stable lamp performance.

Recording Controller. Taylor Instrument Cos., Rochester, N. Y., has made available a new process-timing mechanism which is said to assure exact duration of batch processing, as well as precise temperature or pressure control on applications such as hosiery dye machines.

Humidifier. Walton Laboratories, Inc., Irvington, N. J., has announced an industrial humidifier with evaporating capacity of 24 gal. of water per day. Unique features are said to include simplicity of installation and the fact that the unit can be hung close to the ceiling without danger of precipitation or falling of free moisture.

Grease Gun. Alemite Division of Stewart-Warner Corp., 1828 Diversey Pkwy., Chicago, announces a new low-pressure volume-delivery foot gun having a capacity of 25-lb. and pumping approximately 1 cu. in. of grease per stroke; pressure when operated by hand is 3,000-lb.; and when operated by foot, 5,000-lb.

New Dyes and Chemicals

Bleaching and Cleansing Agent

A novel bleaching and cleansing agent which reduces and dissolves iron compounds in an alkaline or neutral solution has been announced recently by General Dyestuff Corp., 435 Hudson St., New York. This compound, Burmol extra, is a white powder of good solubility; its aqueous solutions react weakly alkaline and are stable for some time; however, it is advisable to dissolve the product just before use. Fields of application include: (1) for removing spots, especially rust, from white goods or for treating spotted or yellowed white goods during or after the washing process; (2) for removing iron impurities in general, or for counteracting the yellowish tint of undyed textiles, in particular for bleached textiles which are discolored by the influence of ferruginous water; (3) for stripping dyes which are difficult to remove, as for instance, chrome dyes; and (4) in special cases, for removing iron impurities from natural products. Burmol extra is applied in 0.2 to 2% solutions according to the degree of impurities. With materials susceptible to heat and alkali, such as wool, silk, etc., the Burmol extra solutions are used at a low temperature. Less sensitive materials, such as vegetable fibers, may be treated in hot solutions. The material is left in the Burmol extra solution until the undesirable discoloration has disappeared. After treatment, the material must be well rinsed with water.

Printing Colors

A new line of colors for printing has been announced recently by Nova Chemical Corp., 153 Waverly Place, New York. These colors, known as Nuprint colors, were developed by Maas & Waldstein Co., Newark, N. J. They can be applied directly to cotton, rayon, acetate and other fabrics by means of standard textile printing machinery. After the printed fabric passes over the dry cans, the colors are fixed and the goods are finished in the usual manner, no aftertreatment being required. It is stated that Nuprint colors are bright, print sharply; have excellent tinctorial power; and have excellent fastness to light, washing, and various other agencies to which shirtings, dress goods, etc., may be subjected. They can be used in conjunction with other types of dyes, thus extending the effects that can be produced in textile printing.

Du Pont Chrome Color

E. I. du Pont de Nemours & Co. announces the following new product: Pontachrome Fast Red 2RL, a chrome dye producing dyeings of very good fastness to light.

General Dyes

General Dyestuff Corp. announces the following new products: Phenamine Blue Black BCW, a direct dye suitable for dyeing deep blue-black shades on cotton, rayon, and other vegetables fibers, while leaving relatively large surfaces of acetate rayon practically unstained; fastness to perspiration and water are increased by an after treatment with Solidogen BSE.

Indanthren Golden Orange 3GA Extra Paste Fine, a vat dye similar to Indanthren Golden Orange 3GA Paste, but intended for printing; shades produced have excellent fastness to washing, chlorine, and light.

Calco Colors

Calco Chemical Division, American Cyanamid Co. announces the following new products: Calcomine Fast Black F, a direct dye yielding dyeings of very good fastness to acids, alkalis, and hot pressing; acetate rayon in union materials is left white by this dye, and application at a low temperature leaves wool unstained.

Calcogene Black RBCF, a copper-free sulphur dye producing a red shade of black having a bright and bloomy overcast; dyeings are of very good to excellent all-round fastness.

Phoenix Products

Phoenix Color & Chemical Co., Inc., announces the following new products: Benzaphen Diazo Blue NAF, a developed color recommended particularly for discharge printing where a pure white is required.

Benzaphen Fast Red 8BL, a fast-to-light direct color producing dischargeable shades and leaving cellulose acetate white.

Benzaphen Fast Red F, a direct color having good light fastness and moderate wash fastness.

American Industry is Growing Up!

America is turning on the heat. Everywhere factories are getting tuned-up for greater, smoother, more efficient production—and distribution.

Several years ago SONOCO completed one phase of their expansion program—creating a productive capacity far in excess of their current demands.

Today, this reserve capacity guarantees to the Textile Industry a dependable supply of paper carriers sufficient to meet any emergency.

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DEPENDABLE SOURCE OF SUPPLY

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New Publications

Local Color on Old South

CONFEDERATE GREENBACKS, by Julia Tigner Noland and Blanche Connelly Saucier: The Naylor Co., San Antonio, Tex.; $2.00

This is one of the sweet, nostalgic stories of faraway days in the Deep South. It covers childhood reminiscence of Mrs. Noland, one of the collaborators, during the period following Reconstruction.

Because of its simplicity, its portrayal of normal living in a land where there was plenty to eat but no money to spend, the book furnishes a needed bit of local color on the historical shelf. It will probably be of interest to those in the textile industry who still feel the romance of the Old South when manufacturing cotton, the fiber which the new South inherited as its major crop.

Packing for Export

MODERN EXPORT PACKING: Trade Promotion Series No. 207; Superintendent of Documents, Government Printing Office, Washington, D. C.; $1.00

This new handbook just released by the Department of Commerce devotes considerable space to the description of containers and methods used in packing textile goods for export shipment. Consideration is given to packing to prevent damage or loss, and also to achieve maximum economies in transportation and duty charges and to create customer satisfaction.

40th Anniversary of Georgia Association

REPORT OF THE 40th ANNUAL MEETING OF THE COTTON MANUFACTURERS ASSOCIATION OF GEORGIA: published by the association at Atlanta, Ga.

Although "Proceedings" booklets are apt to be boresome, this definitely is not. Wide use of photographs helps to break up the text and to give the whole book an appeal. This year's issue is particularly interesting because of the celebration of the 40th anniversary of the association.

A Guide for New Yorkers

LEGAL POLITICAL AND BUSINESS GUIDE, by N. H. Mager: Central Book Co., New York: $2.50.

A handsomely bound volume which is a combination desk calendar and almanac. It is printed principally for those residing in New York City or nearby.

It tells when to pay your taxes, and lists New York City's district attorney's offices. It briefly describes the administrative agencies of our National Government; tells how to serve a process and who will serve them for you; it gives a price list for legal practices; and gives the addresses of the Democratic County Executive Committee.

In short, it covers so much territory in such a blithe manner that this reviewer for one would feel too cautious to be guided by this all inclusive annual.

News of Suppliers

Textile-Finishing Machinery Co., Providence, R. I., has changed its plan of operation to conform to the modern need of the "tailor-made" machine for maximum efficiency on a particular job in a textile mill. The company will cooperate in the design and construction of special machinery for individual requirements, in addition to continuing its standard lines of finishing equipment. For the execution of this new policy, the company has appointed Thomas Harris as general manager, as reported in these columns last August. Mr. Harris was superintendent of various mills in the Manville-Jenckes Corp. group for 10 years and since organized the Harris Textile Machinery Co., Providence, which specialized in developing special machinery for new textile products. His experience and resourcefulness fit him peculiarly well to Textile-Finishing's new plan. Wallace Taylor, lately acting sales manager and for some years with the company, has been promoted to sales manager, in which office he will function as a service manager as well. His schooling in Europe and at Lowell Textile Institute, and his 15 years of plant experience in textile finishing, qualify him to play his part in carrying out the new trade policy of his company.

Thomas Harris, newly appointed general manager of Textile-Finishing Machinery Co.

Wallace Taylor, lately promoted to sales manager of Textile-Finishing Machinery Co.

Geo. S. Harwood & Son, specialists in textile feeding machinery, have removed their sales and general offices from the temporary location in Watertown, Mass., to new and permanent offices in their factory building at 50 Lagrange St., Worcester, Mass.

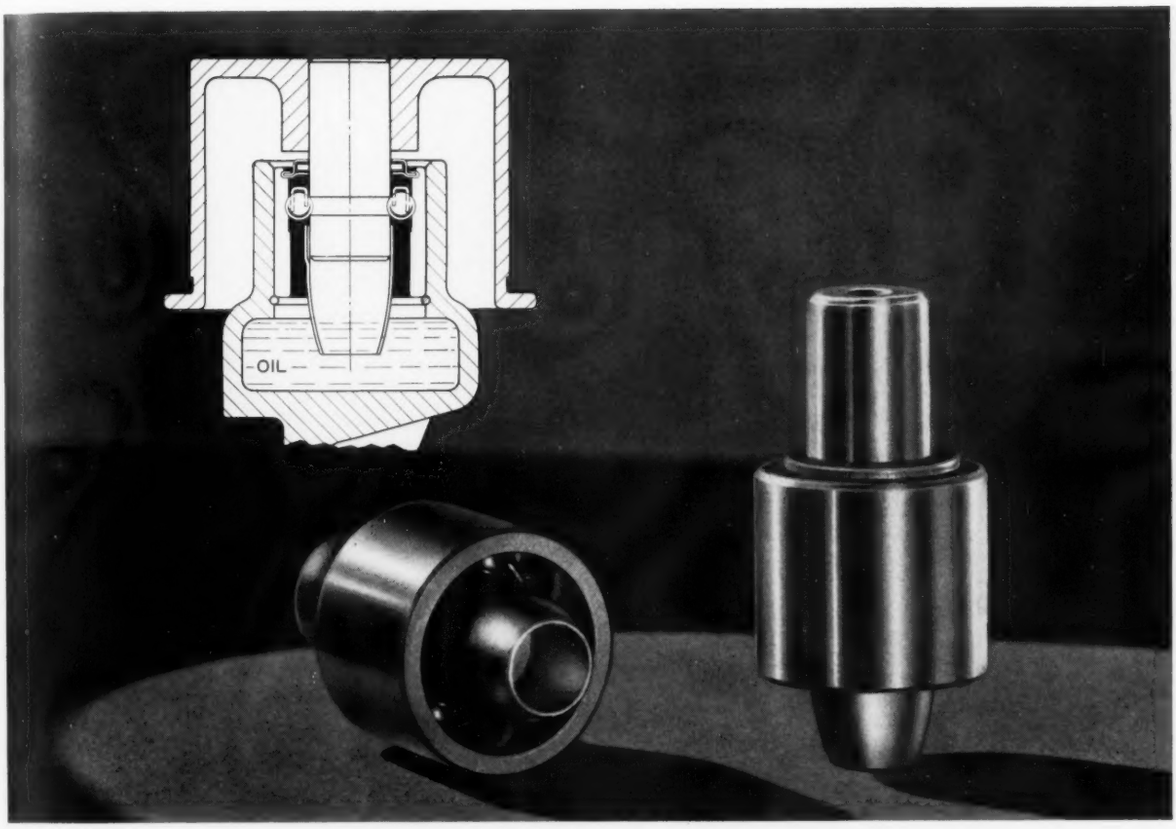
Clarence L. Meyers & Co., Philadelphia, have appointed Alfred G. Symonds, formerly with Dixie Mercerizing Co., to handle their yarns in New England and parts of New York and New Jersey.

Forrest Yarn Co., Philadelphia, has moved from 119 South 4th St. to new and larger quarters in the Lewis Tower Bldg., 225 South 15th St.

American Textile Engineering Co., Inc., Kearny, N. J., and its affiliated corporations, have been merged into one corporation known as Kearny Mfg. Co., with offices and shops at Kearny, N. J., and Greenville, S. C. John Klinck, sales representative for many years, is in charge of the Greenville office, assisted by the company's chemical and engineering experts. A new line of finishing compounds, known as Plura-Products and Sylca-Products, has recently been announced.

A. H. Rice Co., Pittsfield, Mass., manufacturer of threads, has appointed Adelphia Textile Co. as representatives for the sale of Nylon seaming and looping thread in Pennsylvania

The *Only Bearing* with In-built Centrifugal Pump



FOR VERTICAL TAPE TENSION PULLEYS

HERE is the pulley bearing that has *everything*—even its own oil-circulating system.

Top facts are these:

Designed for years of trouble-free service.

Completely enclosed when mounted, thus fully protected from dirt or lint.

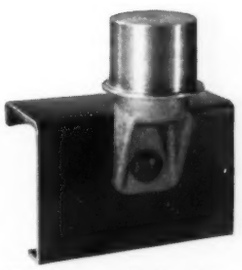
Extremely light running, has friction-free metallic seal.

Relubrication needed only at one to two year intervals.

Pulley and bearing instantly removable without tools.

Easy to mount, with no locknuts, springs, screws or other gadgets required.

And—back of these is New Departure's knowledge and experience—more than fifty years of precision manufacturing. Ask for Bulletin A-287. New Departure, Division of General Motors, Bristol, Conn.



The Tension Pulley bearing as used in the new and highly efficient Atwood 5 B machine for doubling and twisting silk and rayon yarns.

NEW DEPARTURE

ORIGINATOR OF THE SELF-SEALED BALL BEARING

2912

ON PAGE 147 of last month's TEXTILE WORLD, appeared a picture of Miss America. In case you didn't see her, we're running her again as above. Stanley Whiteway, advertising manager of Proctor & Schwartz, selected Miss Frances Burke as one of the models for his September advertisement before she won the national contest. The beauty queen is daughter of a Philadelphia fireman. She is shown above as a hosiery boarder, the role she played in the Proctor & Schwartz ad last month.

New Jersey, Maryland, Virginia, Delaware and New York City. James T. Hunter and Robert A. Hunter of Adelphia are now distributing samples.

Allis-Chalmers Mfg. Co., Milwaukee, Wis., has appointed Chester H. Norton, purchasing agent at the Boston works, to be assistant general manager of purchases at the company's main offices in the West Allis Works at Milwaukee, where he will assist Fred E. Haker, general manager of purchases for the company.

Reliance Electric & Engineering Co., Cleveland, has opened a sales office in Houston, Tex., with Frank A. Denison, Jr., as district manager. He is a native of Texas, and has been a member of Reliance's sales engineering staff at the Detroit office since early 1937.

American MonoRail Co. has removed its offices from La Grange, Ga., to Atlanta, Ga., where quarters have been taken at 1000 Peachtree St., N. E. W. S. Murphey is district manager.

American Cyanamid Co., New York, has appointed Reginald M. Banks as assistant to the president to promote coordination of research and sales activities. Mr. Banks came to Cyanamid in 1928 from Nitrate Agencies Co. He has recently been manager of the Organic Chemical Sales Department, in which office he is succeeded by Walter T. MacAdam.

Roger W. Cutler, 141 Milk St., Boston, has announced use of Nylon sewing thread for joining cotton spinning and twisting tapes manufactured by his company. Use of the new material is said materially to reduce tape failures at or near the joint.

Leeds & Northrup Co., Philadelphia, has promoted W. Richison Schofield, formerly chief engineer, to be director of engineering. John W. Harsch, assistant chief engineer, has been advanced to chief engineer. Mr. Schofield joined Leeds & Northrup in 1916 and is an authority on pyrometry and automatic control.

Commercial Solvents Corp., Terre Haute, Ind., has appointed Hillary Robinette, formerly president of the W. H. & F. Jordan Mfg. Co., to promote its recently introduced textile specialties.

American Management Association, New York, Production Division, is sponsoring a meeting of production executives to study problems of the industrial preparedness program at Cleveland, Nov. 12 and 13.

Tompkins' Label Service, Philadelphia, Pa., has established a plant at Atlanta, Ga., to expedite shipments and service to its southern customers.

American Aniline Products, Inc., Lock Haven, Pa., plans expenditure of $250,000 for expansion of facilities at its plant, according to Talfryn James, vice-president.

National Oil Products Co. of Harrison, N. J., has its stock now listed on the New York Stock Exchange, according to C. P. Gulick, president and chairman of the board. The stock has been listed on the Curb Exchange since June, 1936.

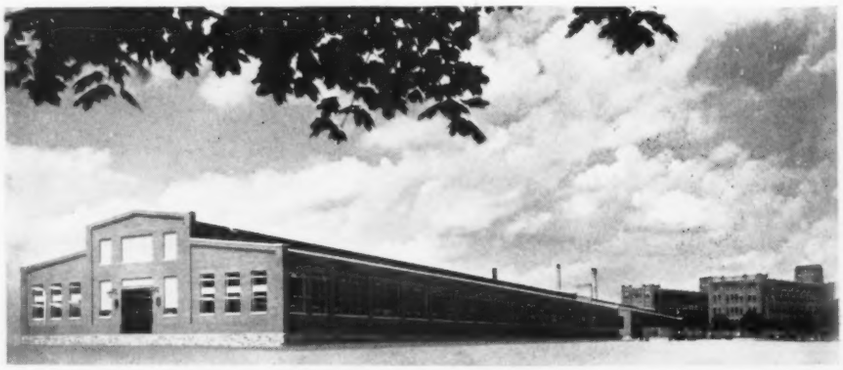
DR. G. L. CUNNINGHAM who has joined the technical service department of Columbia Alkali Corp., chemical sales division of the Pittsburgh (Pa.) Plate Glass Co. Since 1930 he has been research chemist at Mathieson Alkali Works, Niagara Falls, N. Y. He is a native of Spartanburg, S. C.

Gill Leather Co., Salem, Mass., has made ingenious use of its invoice form to stress the outstanding characteristics of its roller covering.

Cutler-Hammer, Inc., Milwaukee, Wis., has appointed R. L. Hibbard, formerly of its New York office, to the merchandising sales staff of the Detroit office.

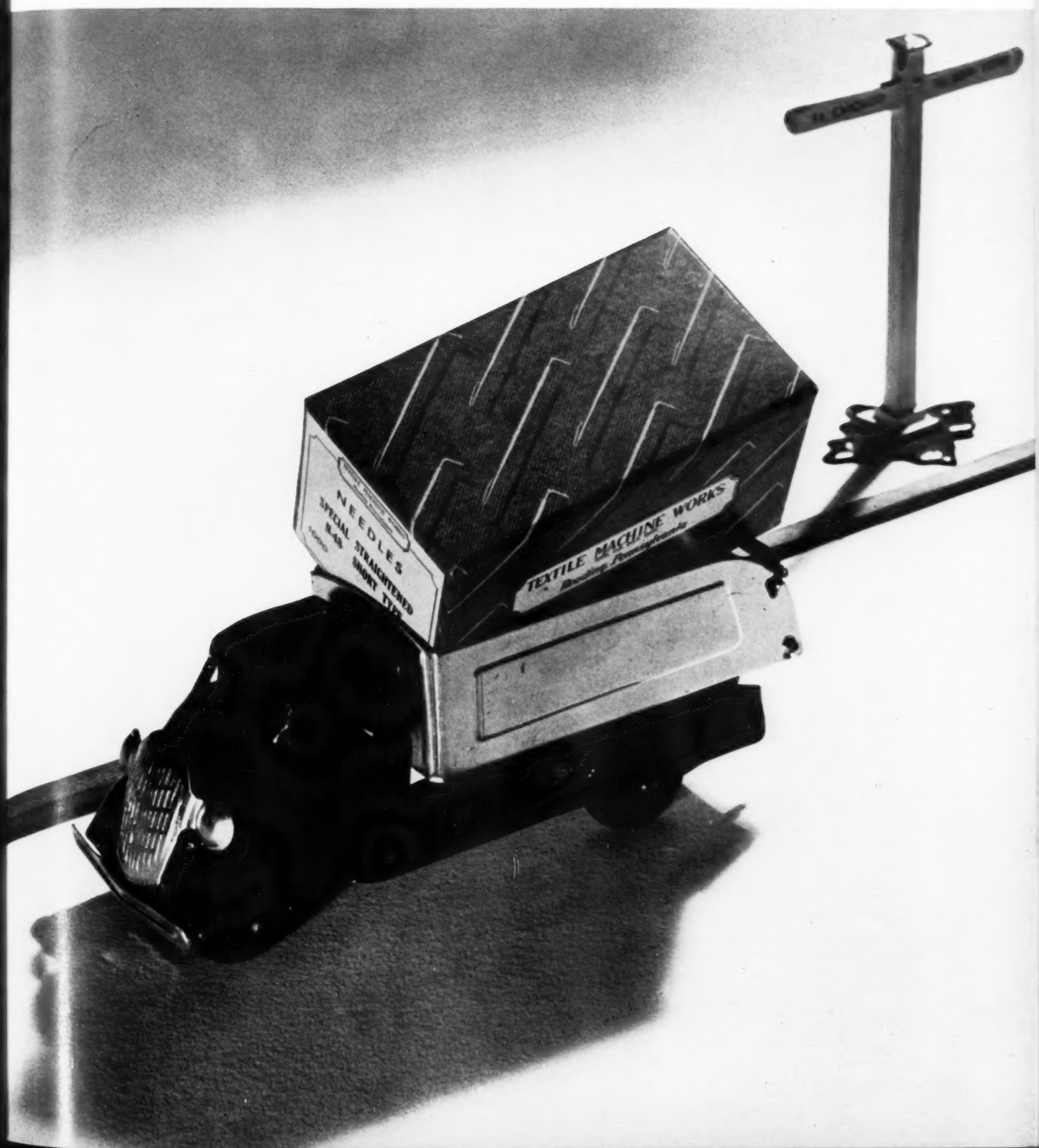
Graver Tank & Mfg. Co., East Chicago, Ind., has appointed Daniel E. Igo as sales and promotion engineer, specializing in fabricated stainless and composite steels. Mr. Igo was formerly with Luckens Steel Co., in their alloy sales division. He will cover eastern territory for Graver, with headquarters at the company's New York office.

Manhattan Rubber Mfg. Division of Raybestos-Manhattan, Inc., Passaic,



TEXTILE MACHINE WORKS, Reading, Pa., as a part of its continuous modernization program, has recently completed the erection of two new buildings (each 101x380 ft.) shown in foreground of illustration. In one building the following departments have been relocated: metal pattern, braiding-machine carriers, yarn carriers, sinkers and dividers, punch and die, and die press. In the other building are the screw machine and tinsmith departments. Buildings are identical, and each has its own tool crib, locker room, and wash room.

"... and we're getting new customers since we began knitting with TMW Needles."



GOOD GOLF was shot by this foursome at the recent Asheville, N. C., meeting of Southern Hosiery Manufacturers Association. The group includes (left to right) S. J. Gillie and A. L. Brassell, both of U. S. Testing Co.; G. S. McCarty, of Carolina Aniline & Extract Co.; and Donald McPhail, of American Smelting & Refining Co.

N. J., has purchased the Brighton Mills plant adjacent to its main plant at Passaic, according to announcement made by F. L. Curtis, general manager.

Carter Traveler Co. and **Mill Devices Co.**, divisions of A. B. Carter, Inc., Gastonia, N. C., are now being represented in Georgia, Alabama and part of Tennessee by H. Searcy Elliott, formerly overseer of twisting and finishing at Unity Plant of Callaway Mills LaGrange, Ga. W. A. Hunt, who formerly covered that territory has been promoted to general superintendent of Carter Mill, Lincolnton, N. C., a division of A. B. Carter, Inc., at the same time retaining a portion of his duties on sales promotion.

Pacific Heating & Air Conditioning Exposition will be held in San Francisco, Calif., June 16 to 20, 1941, at the Exposition Auditorium in the Civic Center. At the same time will be held the summer meeting of the American Society of Heating & Ventilating Engineers, and also the meeting of the Heating, Piping & Air Conditioning Contractors National Association. This exposition is a special interim showing between the normal sequence of the sixth and seventh International Heating & Ventilating Expositions, the sixth having been held at Cleveland last January, and the seventh to be held at the Commercial Museum in Philadelphia, Jan. 26 to 30, 1942.

Neva-Moth Corp. of America, New York, announced last month a plan whereby each draftee can have three suits and one overcoat Neva-Moth treated without charge. According to the plan, as soon as a drafted man is notified to report, the Neva-Moth Corp. will pick up four garments from him to be mothproofed. The 22,000 retail stores and the various dry-cleaning establishments and laundries with which the Neva-Moth Corp. has arrangements will assist in carrying out this plan.

WALTER A. MEYER, assistant in charge of the Texrope Division, Allis-Chalmers Mfg. Co., Milwaukee, Wis., caught by the camera just after he has caught an unusual specimen of northern pike of which he was justly proud. Mr. Meyer was on vacation in the Quetico Forest Reserve in Ontario. Art Pohlman of Milwaukee took the pix.

Schmidt Mfg. Co., New Bedford, Mass., has purchased L. W. Milliken & Sons of Franklin, Mass. Founded in 1881, the Milliken firm was one of the pioneers in the manufacture of canvas lug straps, leather pickers, and other textile loom parts. The entire equipment of this concern has been removed to New Bedford and consolidated with the Schmidt Mfg. Co. production. Business will be conducted as formerly with all Milliken's customers.

American-Marietta Co. has been formed as result of merger of American Asphalt Paint Co., Chicago, with its subsidiary, Marietta (Ohio) Paint & Color Co. Grover M. Hermann, founder of American Asphalt Paint Co., is president of the new company. George A. LaVallee, president of Marietta, continues as a director of the American-Marietta Co. The plants operated by the company are located at Kankakee, Ill.; Marietta, Ohio; High Point, N. C.; and Lincoln, N. J.

Air Reduction Co. has appointed Howard R. Salisbury manager of the plant at Philadelphia. Mr. Salisbury has been connected with Airco for 15 years. He was manager at Bettendorf, Iowa, for two years and assistant manager at Philadelphia for the last six years. He succeeds William W. Barnes, retired. H. B. Seydel, formerly assistant sales manager of the New York District, has been appointed assistant manager at Philadelphia.

Westinghouse Makes Industrial Survey

An informal luncheon was given officials of the Westinghouse Electric & Mfg. Co. Oct. 2 at the Piedmont Driving Club by Preston S. Arkwright, president Ga. Power Co., Atlanta, Ga. Among the honored guests were A. W. Robertson, chairman of the board, G. H. Bucher, president, Ralph Kelly, vice president in charge of sales, G. Edward Pendray, asst. to the president, L. W. Lyons, treasurer, M. W. Smith, vice president in charge of engineering, A. H. Phelps, general manager purchases and traffic, H. F. Boe, manager service department, B. W. Clark, president Westinghouse Electric Supply Co. Local representatives of the Atlanta office, under the direction of Thos. Fuller were also present. The officials are conducting a survey of the South and will include Knoxville, Tenn. and Birmingham, Ala. in their itinerary.

"You cannot make a crab walk straight"

ARISTOPHANES

In a 40-hour week the new READING high-production twenty-six section forty-five gauge full-fashioned knitting machine produces 97 per cent more volume and 16 per cent more value than the ordinary twenty-section forty-two gauge machine . . . *And remember: Money invested in modern machinery not only pays big dividends of itself but also serves as insurance for your total investment.*

TEXTILE MACHINE WORKS • READING, PA.

FREE FOR THE ASKING

Readers interested in literature reviewed on this page may secure copies by writing to Textile World, 330 West 42nd St., New York, giving their company connection, title of item desired, and date of issue in which it was reviewed.

Air Conditioning. Parks-Cramer Co. August issue of *Parks' Parables* tells in narrative form the evolution of air conditioning equipment as it is applied in the textile industry.

Painting. American-Marietta Co. Solutions to difficult industrial painting problems are described in a 128-page maintenance painting handbook.

Shipping Method. Acme Steel Co. The skid-load process for shipping a variety of products is described and pictured in folder AD18.

Thread Cleaner. Ralph Shipman. Descriptions and diagrams of a variety of thread cleaners and slub catchers manufactured by this company are included in a 12-page booklet.

Lubricants. E. F. Houghton & Co. 4-page folder describes company's lubricants for electric motors, outlines their advantages, and points out that current national-defense speed up demands faultless lubrication.

Stainless Steel. Electro Metallurgical Co. Corrosion-resistant materials for making cylinders on which cloth is dried are mentioned and pictured in the September issue of *Electromet Review*.

Oil-Retaining Bearings. Bound Brook Oil-Less Bearing Co. Porous bronze oil-retaining bearings in many sizes are tabulated and accompanied by other valuable information in stock list No. 1.

Silicate of Soda. Philadelphia Quartz Co. Uses and advantages of silicate of soda in textile processing are the subject of Bulletin 178.

Gear Reducers. Link-Belt Co. Herringbone gear reducers are described in Booklet 1519-A, which also contains data on several new sizes, changes in construction, power ratings, and dimensions.

Monel Metal. International Nickel Co. Engineering properties of Monel are described in Bulletin T-5, which has been revised as of Sept. 1940.

Loom Pickers. Danielson Mfg. Co. 4-page folder describes new rawhide loom picker construction and points out its advantages, said to include higher production, fewer seconds, and improved weave-room safety factor.

Ball-Bearing Lubrication. New Departure Division, General Motors Sales Corp. Selection and application of oils and greases to ball bearings is described in a 15-page booklet.

Fluorescent Lights. Hygrade Sylvania Corp. In a 24-page catalog, various styles of fluorescent lighting fixtures are pictured and data on their uses given; included are data on specifications.

Clothroom Equipment. Hermas Machine Co. How streamlining can reduce number of operations, and save time and labor, is told in the September issue of *Clothroom Spotlight*.

Woolen Equipment. Davis & Furber Machine Co. How this company's preparatory and spinning equipment fits into increased National Defense demands on woolen mills is told in the August issue of *Davis & Furber News*.

Counters. Durant Mfg. Co. Textile applications for counters of various types are discussed in a recent bulletin.

Chlorine Handling. Mathieson Alkali Works, Inc. How to handle safely liquid chlorine is the subject of 24 suggestions embodied in this recently revised safety chart, intended for wall hanging.

Desuperheating Control. Bailey Meter Co. Pressure reducing and desuperheating control of the air operated type is illustrated and explained in Bulletin 107-A, which includes diagrams of arrangements and installation photographs.

Water Wheels. Rodney Hunt Machine Co. Complete line of water power equipment is described and pictured in Catalog WW40, which also contains a large section of hydraulic engineering data.

Asbestos. Raybestos-Manhattan, Inc. Asbestos textiles and textile products are described and pictured in a 36-page booklet which gives data on raw stocks, rovings, yarns, fabrics, and items made from asbestos.

Rayon Sizing. Charles B. Johnson. Sizing materials for rayons, and the new textile unit of American Viscose Corp. are discussed in the September issue of *Rayon Warp Sizing Specialist*.

Belting. J. E. Rhoads & Sons. How to solve belting problems with this company's products is told in a 32-page booklet which includes drive data sheets and diagrams of typical drives.

Feed-Water Regulators. Northern Equipment Co. Bulletin 429 describes simplified two-element, steam-flow boiler-feed-water regulator; contains 16 pages of operating diagrams, performance charts, and installation photographs.

Roofing Material. Philip Carey Co. Asphalt roofing material manufactured under recently granted patents is described in a booklet which contains numerous photographs, data on test results, etc.

Fans. Buffalo Forge Co. Bulletin 3329 describes line of axial flow fans; operating data, dimension diagrams, and engineering information are included.

Electronic Devices. General Electric Co. Booklet GES2411 gives a description of electronic devices available for industrial uses, and contains several photographs showing typical installations, including some in textile mills.

Control Instruments. Wheelco Instruments Co. Bulletin S2-2 illustrates and describes line thermocouples, thermocouple wire, lead wire, insulators, protecting tubes, etc.

Self-Locking Nuts. Elastic Stop Nut Corp. Folder gives concise explanation of construction and self-locking action of elastic stop nuts and lists advantages obtained through their use.

Valves. Homestead Valve Mfg. Co. 4-page folder pictures a variety of valve types and shows several installations of these; included with each installation photograph is a brief record of the type of service and type of valve used.

Spinning Roller Covering. Gill Leather Co. Comprehensive booklet describes development of roller covering, materials used, types of leather and correct methods of covering; included are several pictorial pages illustrating mechanical features of roller covering and comparing advantages of various types of covering.

Shuttles. Draper Corp. Shuttle life is discussed in the September issue of *Cotton Chats*, which contains also suggestions for increasing the length of time shuttles last.

Electrical Connector. Burndy Engineering Co., Inc. 15-page booklet contains series of charts showing how to select proper connectors for a given condition; included is outline of a method for checking up on condition of existing electrical connections.

Lockers, Cabinets, Shelving. Penn Metal Corp. of Penna. 24-page pocket size booklet includes specifications and photographs for lockers in a variety of sizes and shapes, cabinets for various purposes, and shelving of several types.

Magnetic Starters. Trumbull Electric Mfg. Co. Circular 322 illustrates and explains features of across-the-line magnetic starters.

Dust Collector. Prat-Daniel Corp. Tubular dust collectors are the subject of Catalog No. 108, which contains eight pages relating to centrifugal collection, and includes installation photographs, diagrams, and other data.

Oil Circuit Breakers. Westinghouse Electric & Mfg. Co. 12-page booklet No. 33-700, describes De-Ion Type O oil circuit breakers for indoor service for voltages from 15,000 to 34,000.

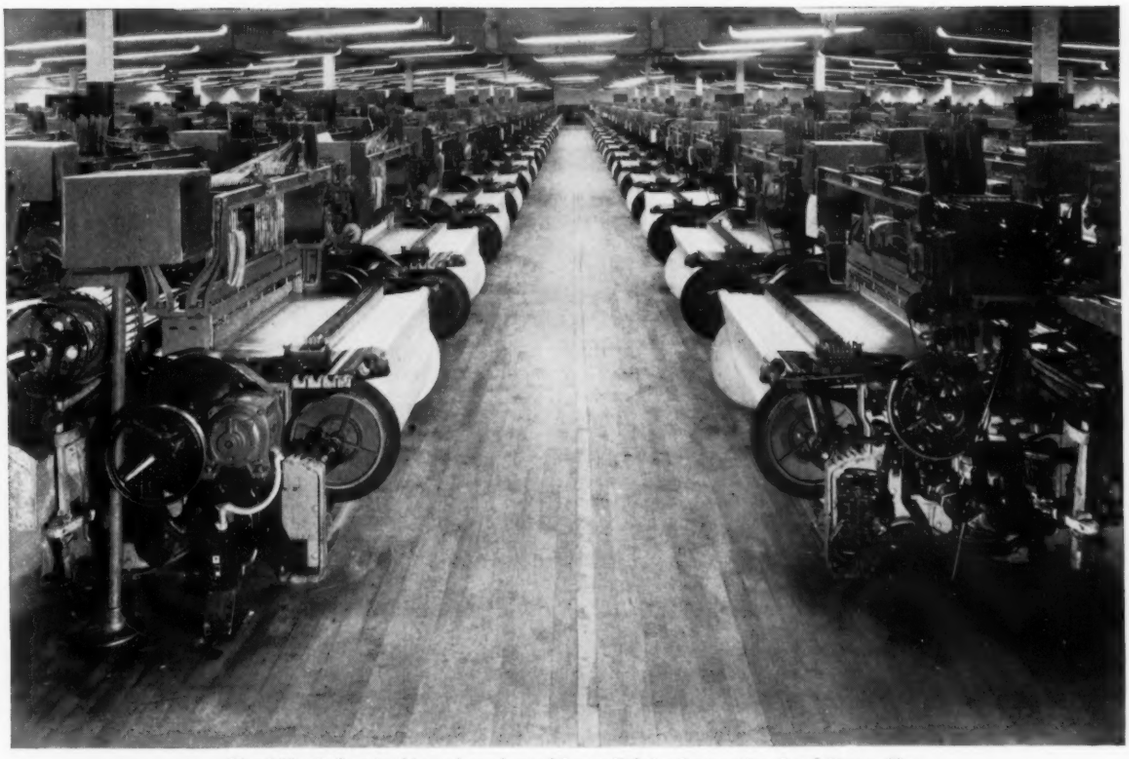
Water Treatment. Permutit Co. Removing silica from boiler feedwater by a new process utilizing metallic oxide sludges is described in a recent bulletin.

Mercury Lamps. General Electric Co. Folder Y-0224 contains six pages of text and pictures pertaining to mercury lamps for industrial uses.

Air Conditioning. Bridges-Wilson Corp. Company's equipment for conditioning worsted fabrics, drying knit goods, tenter drying, and air conditioning is described and pictured in 4-page folder.

EXPERIENCE SAYS:

"Better Choose Northern Hard Maple"



Hard Maple floor in this modern plant of Carter Fabrics Corporation, South Boston, Va.

Hard Maple in plants built in the 80's—Hard Maple in plants built last week!

Why? Because this superior flooring proves itself under all conditions the most satisfactory flooring for mills. The older your plant, the more proof you've had of its lasting economy. The more *modern* your plant, the more you want Maple.

For only Hard Maple combines so many advantages. *Protects workers*—its resilient comfort retards fatigue; its dry warmth and sanitation guard health. *Protects machinery*—creates no dust to injure delicate bearing surfaces. *Speeds up traffic*—both trucks and men move faster with less effort on this smooth-surfaced floor.

Lowers service costs—properly finished, brushing alone cleans Maple; it doesn't catch lint. Maintenance is easier, because Hard Maple doesn't sliver or splinter; offers unequalled resistance to abrasion, even under the wear of heavy trucks. Simplifies alterations, too.

On all counts Maple is modern. Specify trademarked **MFMA** Maple, and make sure of all *Northern Hard* Maple, and strict association grading. In strips or blocks—*ask your architect.*

MAPLE FLOORING MANUFACTURERS ASSOCIATION
1793 McCormick Building, Chicago, Illinois

See our Catalog data in Sweet's, Sec. 11/78. Write for leaflet on heavy-duty finishes for old or new floors.

Floor *with* MFMA Maple

REG. U. S. PAT. OFF

(NORTHERN HARD)

THIS IS NO. 23 OF A SERIES ON

GETTING THE MOST FROM WINDING

Information about winding designed to show improvements in winding equipment and new ideas in the winding operation

RECOMMENDATIONS FOR SLUB CATCHER SETTINGS

Our attention has recently been called to the formula for determining yarn diameter now being used by United States Testing Company and the American Society of Testing Materials. On the basis of new information, we now recommend that the formula for cotton yarn published in our Bulletin 118 (page 19) be replaced by the following:

$$\frac{1}{.90 \times \sqrt{840 \times \text{count}}} = \text{Yarn Diameter}$$

Or, in simpler form:

$$\frac{.0383}{\sqrt{\text{count}}} = \text{Cotton Yarn Diameter}$$

From this formula, we get the following:

Cotton Count	*Yarn Diameter*
10	.012″
15	.010″
20	.0085″
25	.0075″
30	.007″
40	.006″
50	.0055″
60	.005″

These yarn diameters are used as a guide for setting slub catchers. When using the Blade Slub Catcher on the Roto-Coner,* the setting for carded yarn should be about twice the yarn diameter, and for combed yarn, about one and one-half times the yarn diameter. When using the MacColl (needle-type) Slub Catcher, the opening should be twice as great as the blade setting.

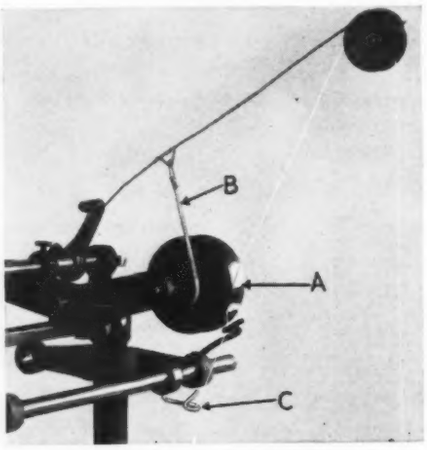
When using both Blade and MacColl Slub Catchers on the same bracket, many mills maintain a fixed difference between the two settings which applies for a wide range of yarn counts. For example, if the fixed difference between the Blade and the MacColl were .005″ and the Blade were set at .014″, then the MacColl would be set at .019″.

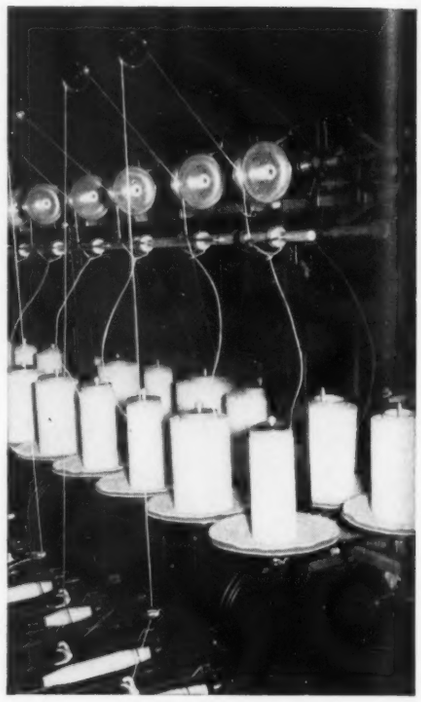
This fixed difference varies, from mill to mill, depending on the type of work and the character of the slubs removed. If there were too many slubs caught by the MacColl guide with a setting of .019″ and the blade setting was satisfactory, the fixed difference between the two settings might be increased to .007″, in which case the needle setting would be .021″.

It is impossible to make a definite recommendation for slub catcher settings because of the several types of slub catcher, various winding speeds and changing requirements for quality. The best setting can be determined by mounting slubs on a blackboard for examination. If only large slubs appear, the setting should be closed; if there are many slubs on the board, the setting can be opened to reduce the number of breaks, making it unnecessary to replace small imperfections with knots.

CREPE TENSION FOR OVEREND DELIVERY FROM LARGE PACKAGES (No. 90 Winder)

Careful mill tests of the new Crepe Tension for the No. 90 Winder have convinced weavers of crepe fabric that they can now enjoy the many advantages connected with large supply packages.





Overend delivery from packages up to two pounds which cannot be successfully unrolled means: less changing of spools; easier starting at high speeds with less end breakage; a steadier, more uniform tension; freedom from strained yarn and consequently better quills.

This Crepe Tension incorporates two discs (A) firmly pressed together and forming a V slot in which the yarn is threaded and allowed to find its own diameter. The band (B) is attached to the Compensator arm and acts as a brake on the discs to control the amount of tension. The yarn, threaded around the discs, causes them to turn, and there is no opportunity to chafe the yarn or distort the twist. Yet no kink can go through.

The pigtail (C) is movable so that it can be centered independently over the supply package while the compensator wheel is centered directly over the winding package.

"THERE'S A UNIVERSAL WINDER FOR EVERY TEXTILE NEED"

UNIVERSAL WINDING COMPANY

PROVIDENCE BOSTON PHILADELPHIA UTICA CHARLOTTE ATLANTA

*Reg. U. S. Pat. Off.

THE OVERSEERS' CORNER

THE OLD ARMY GAME

A PETE & BILL DISCUSSION

Bill happened to walk into Pete's office one day in the early fall when the leaves were beginning to turn and football was in the air. Pete was standing glumly at a window.

"What's ailing you, Pete?" asked Bill. "Lost your best friend?"

"No," replied Pete. "It would probably be much simpler if I had. I have discovered that one of my second-hands has been pulling 'the old army game' on me. He's been passing my orders on down to the employees with the implication that 'the boss wants this done and you've got to do it even though it seems like a silly idea to me.' You know what that sort of thing will do to morale in an organization. I don't know what to do about it."

"I know what I'd do about it!" said Bill viciously jerking the cigar from his mouth. "I'd fire him! That's all. He's a—he's a fifth columnist! That's what he is."

Pete continued to look out of the window. "Well, I sort of hate to do that as he is a pretty good man fundamentally. There must be some other way. Maybe I could reason with him and explain how his practice of passing the buck makes me look like a fool and cannot help but hurt the entire organization."

". . . when the leaves were beginning to turn."

"You can waste your time trying to reason with a guy like that if you want to," said Bill. "As for me I'd simply get rid of him right away. When a man has a habit of passing the buck there is not much you can do with him. He just won't accept responsibility."

"Well, I don't know, Bill," replied Pete. "I think I'll give the fellow one more chance. I'd rather develop this man who already is in our organization into something worthwhile than bring in a new one from the outside."

"Okay, son," said Bill, walking out. "You are just feeding him with one hand while he chews up the other. You certainly must enjoy being knifed in the back!"

How would you handle the second-hand who "blames every order on the boss"?

Letters From Readers

Give Instructions Plainly

"Ridiculing Mistakes"
Pete & Bill, May 1940

Editor, Overseers' Corner:

Vicious ridicule and harsh reprimands will not in any way reduce stupidity, but rather reduce the desire for responsibility and eagerness of showing what really is in a man. Bill may think the Smith boy really dumb but there is that latent possibility that Bill is equally as dumb due to his narrowness and intolerance of opinion. Ruined goods or damaged equipment are things that will vex the best foremen, but then it is these things that reflect the fact that overseers or department heads are failing in discharging their duties. Instructions given plainly —better written than verbal—will in the majority of cases eliminate many of these slips that cost so dog-gone much money.

LAMAR FOGEL (*South Carolina*)

In Doubt?—Do Something!

"Confiding In Second Hands"
Pete & Bill, July 1940

Editor, Overseers' Corner:

We think the Pete and Bill discussion on how much to tell the secondhand is very timely. The overseer for whom we worked for several years would frequently call us after lunch and say that he would be out of town during the afternoon. He expected us to keep close enough in touch with everything in the room to be able to handle the job without a hitch. The only specific instructions he ever gave his secondhands were: "When a problem must be handled that is out of the regular routine, get all the light on the subject which is available within your time limit. Decide

CONTRIBUTIONS to the letters and practical helps in "The Overseers' Corner" are paid for when published without regard to length. We use letters (not over 200 words) discussing the material on this page or any other pertinent matter whether of mechanical, managerial or just plain human interest. Those who contribute practical helps or kinks which are published (not over 500 words) will be paid additional for an appropriate sketch to illustrate their device. It is not necessary to submit finished drawings. Contributions of greater than specified length may be given consideration as articles. If these pages interest you —contribute something to them to interest others. Address Editor, Overseers' Corner, Textile World, 330 West 42d St., New York.

on a course of action. Then do something about it!" He would forgive a man for making a mistake, but never for fearing to make a move.

In our own office we have no locked drawers or private notebooks or files to which our secondhands are not allowed free access. All questions which have the slightest bearing on the operation of the job are discussed with the secondhands, frequently with all of them together. We feel that the more our secondhands know about the job, the more help they will be to us and the more efficiently the department will be operated.

P. L. H. (*South Carolina*)

Employee Blunders

"Ridiculing Mistakes" Pete & Bill, May 1940

Editor, Overseers' Corner:

Bill's idea of making an example of the Smith boy for what he terms a boner would leave Bill himself wide open to criticism and ridicule for his own lack of anticipation and for not taking steps to prevent just such a thing from happening. If he employs a staff large enough to permit some to wander all over the room and invites them to do anything they think should be done, it would seem that for his own protection he should have either posted a "DON'T START" sign over this particular machine or taken these free lance employees into his confidence and warned them of the condition. I can't see where the Smith boy is to blame at all since he was encouraged to do just what he did and I would suggest to Bill that if he considers it good policy to develop ambition in that manner it would be wise to place some limitation on his proteges until they are experienced enough to realize what they are doing.

H. M. R. (*Massachusetts*)

Painless Publicity

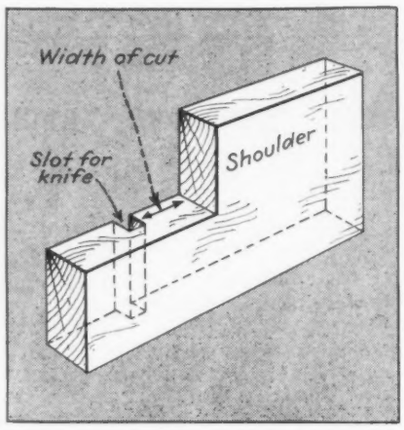
"Ridiculing Mistakes" Pete & Bill, May, 1940

Editor, Overseers' Corner:

Mistakes should not be ridiculed publicly with emphasis on any one personality. Ridicule of that type is a sign of emotional weakness and the reaction will boomerang on the one who uses it. However, mistakes generally go into the building up of the experience and training of personnel and should be publicized as much as possible. In this type of publicity no names should be mentioned, but observations and comments should be made on the cause, cost and prevention of such errors.

C. L. S. (*Auburn, N. Y.*)

Overseers' Practical Helps



Handy guide for splitting leather

Leather Cutting Guide

Anyone who has tried to cut a leather strap or belt lengthwise knows what a difficult job it is to make a straight cut, especially if the only available cutting tool is a knife. A serviceable cutting guide that will assure clean, straight cuts can be fashioned in a few minutes from a wooden block. At one end of the block leave a shoulder large enough to be held securely in a vise. In the part extending from the shoulder, make a vertical slot. The distance from slot to shoulder is the width of cut.

To operate the cutting guide, clamp the shoulder in a vise so that the slot is on the far side. Place in the slot a knife blade with cutting edge away from the operator, and hold the knife by clamping the fingers of the left hand around the end of the block. The end of the blade must protrude above the wood. Draw the strap through with the right hand while pressing it against the shoulder with the left thumb.

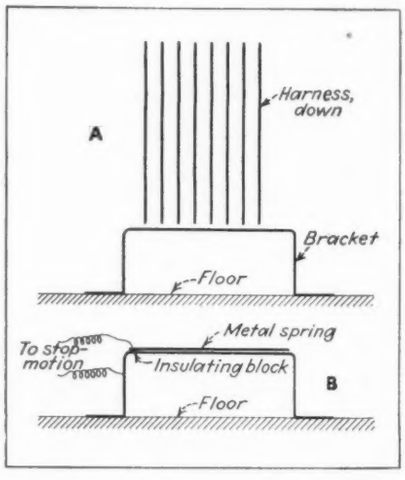
W. C. Westbrook (*Ga.*)

Safety Bracket Under Harness

A bad smash frequently occurs when the breaking of a harness cord allows one end of the harness to drop. Such smashes can be prevented by a pair of brackets fastened to the floor under the harness, as shown in *A*. Made of ¼-in. flat steel, the brackets should be so constructed that there is about ½ in. clearance between bottoms of shafts and tops of brackets when shafts are down. Brackets should be spaced to lie from 6 to 12 in. inside each end of the harness frames.

A metal spring on each bracket, properly placed, insulated, and connected to the warp stop motion as shown at *B*, will stop the loom when a harness cord breaks.

C. S. B. (*Pa.*)

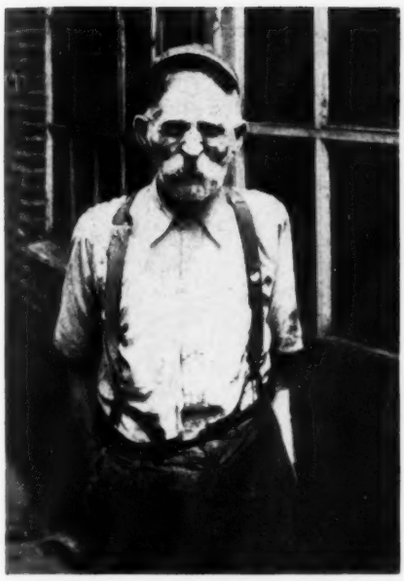


Floor brackets prevent smashes; stop loom when harness cord breaks, if connected to stop motion

At Work for 72 Years!

FOR 72 YEARS continuously, George M. Heiwig has been associated with the Seymour Woolen Mills, Seymour, Ind. Until we hear of a longer term of employment, we will believe that this constitutes a top record in the textile or any other business. He is now 86 years of age, enjoying the best of health, and operating his job as chief engineer of the woolen mills thoroughly and efficiently.

Mr. Heiwig was born in Lawrenceburg, Ind., on June 23, 1854, the son of an engineer who had worked on steamboats and with railroads. Young Heiwig joined the Seymour Woolen Mills in 1868. He was 14 years old at the time and the plant had been in operation only two years. At that time it operated three woolen cards, one blanket loom and several narrow flannel looms. Mr. Heiwig worked in the carding department and shortly became assistant foreman. He was transferred to the dyehouse and later held the position of boss dyer for three years. In 1879



GEORGE M. HEIWIG—Chief engineer for 61 years and with Seymour Woolen Mills for 72 years

the grandfather of the present president of the mill appointed Mr. Heiwig chief engineer.

Since that early date he has maintained and operated for the company a series of five engines, each of which on replacement was found to be in perfect condition and three of the engines are reported to be in operating condition elsewhere at the present time. He has been chief engineer of the plant for 61 years.

Seymour Woolen Mills is proud of Mr. Heiwig and his remarkable record. A year ago he was guest of honor at a banquet given for all employees. At that time he was presented with a gold service pin set with five diamonds. Last June, upon his birthday, he received greetings from practically every employee in the plant. He has two sons, one of whom is an electrician and the other, William F. Heiwig, is in charge of maintenance at Seymour Woolen Mills. Don A. Bollinger, the grandson of the executive who appointed Mr. Heiwig to his post as chief engineer, is now president of the mill. George K. Bartlett is superintendent. The firm operates 14 sets of cards, 5,720 mule spindles and 86 broad looms on blankets and flannels. The plant will celebrate its 75th anniversary next year.

What Are You Crying About?

Handicaps can be overcome and a family financed from a quill machine

By J. C. NORMAN

LOST A FINGER? Broken a leg? Has the old stomach played out? Meet Nathan Hammett, of Sylacauga, Ala., and snap out of it.

He can testify that infantile paralysis is nothing new, for it claimed him as a victim nearly 60 years ago. Since then he has been unable to walk or even to stand without the aid of a cane. Nevertheless, he has reared two motherless children, is now rearing a second family and has acquired property worth at least $6,000.

All financed from a quill machine!

In his youth Mr. Hammett taught school; later he was an assistant postmaster. He came to Avondale Mills in 1915, and was soon placed on the quill machine. In those early days that job was a pain! Week in, week out, month in and month out, one had to sit at the machine, repeating the same motion time and again. But to Mr. Hammett the job was cold turkey, for he possesses capable hands and has never asked more than an even break. Within a few days he was cleaning more quills than anyone else had ever done.

The death of his wife, in 1917, left him with two children, aged three and seven. Asking no aid of anyone, he continued with his job in the mill and did his housework at night. He gave each of these children a good education, and today the boy is in the aviation corps at Brooklyn Navy Yard while the girl is a busy housewife. The burden was lightened in 1922 when he married Miss Effie Royal. Two children born of that union are now 13 and 16 years old.

Before NRA, the writer was frequently awakened at 3 a.m. by the tapping of Mr. Hammett's cane as he

HE CAN TAKE IT!—Nathan Hammett in 25 years has cleaned 317,000,000 quills at Avondale, despite handicaps which would discourage the strongest

SAFETY COLUMN

First Aid for Nervous Shock

"Without attempting to be technical, shock can be described as a sudden vital depression of the nervous system. It is common after any accident and may be serious. People have died from it. To recognize it and treat it is one of the important duties of a trained first aid man.

The signs by which shock may be recognized are:

1. Very pale face covered with beads of sweat.
2. Wide staring eyes—pupils large.
3. "Gone" look.
4. Cold, clammy skin.
5. Feeble breathing, or breathing in long drawn out sighs.
6. Pulse very weak or not felt at all.
7. If conscious the patient may appear to be "dopey" and slow to recognize people or answer questions.

Immediate treatment should be as follows:

1. If there is any bleeding endeavor to stop it immediately.
2. Lay patient on his back with his head low if possible.
3. Turn head to one side so that if patient vomits there will be no danger of choking.
4. Do not move patient if it can be avoided.
5. Loosen tight clothing.
6. Cover patient completely from feet to chin with blankets or coats to keep him warm.
7. If available, place hot applications around patient but be sure they are not hot enough to burn.
8. Hold a cloth moistened with aromatic spirits of ammonia near patient's nose.
9. Rub limbs under the covers toward the body.
10. If conscious, liquid stimulants such as hot black coffee or tea may be given."

—*Seamen's Safety Guide.*

made his way toward the mill. He often worked until 9 or 10 p.m., for to support a family and acquire property a chap had to get in plenty of overtime.

Though home and job come first, Mr. Hammett finds time for other things. He serves on the jury and takes an interest in church and civic affairs. Any worthy undertaking may count on his aid. He plays a number of musical instruments and has earned quite a bit as music teacher. The man who beats him at checkers or dominoes has reason to crow.

Many changes have come about since first he entered the spinning room. Hours are shorter, but the wage has tripled because of long draft, larger packages and better cooperation between foremen and workers. The dinky little quill machine Mr. Hammett first operated is gone. In its place are high-speed models that clean 118 quills per minute, with less labor upon the part of the operator.

Boys and girls Mr. Hammett once teased, counseled and inspired are now staid, middle-aged folks. Their children, now doffers and spinners, find in him the same friend and counselor. Within three years he will be eligible for an old-age pension, but proudly declares that he hasn't the slightest intention of retiring so long as he is able to work. Those who know him best feel sure he may hold his job as long as he likes, for he is one of Avondale Mill's most valued employees and well able to hold his own even in this streamline, competitive age.

Flooded-Type Roofs

Reduce cooling load and lower construction and maintenance costs

BY S. H. COLEMAN

CONTROL OF TEMPERATURE and humidity in textile mills is one of the most important problems with which the industry has had to deal. The realization of its importance, in terms of efficiency, production, and—most of all—dollars and cents, has led to the installation of expensive humidifying and air conditioning systems. In turn, the rapidly increasing application of air conditioning to commercial and industrial buildings has led to a revival of interest in the flooded type roof. This interest is prompted not by a desire to eliminate or cut down on air conditioning equipment, but by the urge to make such equipment more effective and to reduce operating costs. To date flooded type roofs are not common in the textile industry, but appear to merit consideration by textile engineers.

A flooded type roof is nothing more than a level supporting deck covered with an adequately flashed waterproof membrane. A thin sheet of water is held over the whole area by overflow weirs at drain entrances. In most sections of the country normal rainfall is sufficient to compensate for loss of water through evaporation, but an auxiliary water supply is usually included to provide a means for maintaining constant depth regardless of weather conditions. When a water supply is used, float-operated valves are used to control the flow.

The flooded roof, when compared with the ordinary dry sloping roof, has a number of advantages that make its application to commercial structures well worth considering. The more important of these advantages are insulating value, ability to withstand hail and fire, low initial cost, and longer life expectancy. Disadvantages are cost of water required to keep the surface wet and expense of mosquito control. In most instances, both costs are relatively negligible.

The insulating value of the water layer has a decided cooling effect on the building interior. Roof temperature, usually high due to sun exposure, is reduced to a point corresponding to the outside wet-bulb temperature. Where air conditioning equipment is installed, this reduction in heat transmission through the roof greatly decreases the operating charges of refrigeration machinery needed to handle the cooling load.

Ordinary built-up felt and pitch surfacing makes a satisfactory membrane for a flooded roof. The framing required for a flat surface is much simpler than that needed for a sloping surface, making the initial cost of this type of roof comparatively low. Major causes of deterioration of a dry roof are hail, corrosion, creeping in hot weather, and disintegration of the pitch. These are slowed down or eliminated by a layer of water on the surface, resulting in increased roof life and a reduction in maintenance and replacement costs. Added to this are the fire-protection qualities of the water layer.

Weaving and Slashing

Discussed by Georgia Operating Executives at Atlanta

WEAVING AND SLASHING PROBLEMS were discussed at the fall meeting of the Textile Operating Executives of Georgia, held last month, at Georgia School of Technology, Atlanta. James C. Platt, agent of Chicopee Mfg. Co. and general chairman of the group, presided. Erwin R. Lehmann, superintendent of West Point Mfg. Co., Langdale, Ala., led the weaving session; Henry B. Robinson, superintendent of Columbus (Ga.) Mfg. Co., was in charge of the slashing forum.

Several different methods of disposing of oily filling with minimum waste to the mill were ferreted out by Mr. Lehmann. A suggestion which created considerable interest was the use of dirty filling at the beginning of a new warp and at the cut mark, since several inches of cloth are usually sewed or otherwise wasted at these points. At some plants oily or dirty filling is woven into sheeting which is bleached and sold locally. However, the majority of mills reported that dirty filling is simply reeled off the bobbin and thrown into the waste bin, after being checked by the second hand or overseer, who endeavors to fix responsibility for the waste.

Accidents in the weave room were said to be caused by oily and/or wet floors, tools slipping, improper lifting, open knives in pockets, starting looms, flying shuttles, blowing off into eyes, particles from emery wheels in eyes, quills on floor, ignoring safety rules, ignoring first-aid treatment, mashing hands when changing warp beams. As the majority of weave-room accidents were asserted to be caused by falls, it was recommended that the floor be scrubbed if possible on week-ends. When this is not feasible, it is helpful to scrub only one alley at a time. Sawdust should be put on wet places caused by leaking humidifiers, spitting on the floor, etc. Injuries from slipping tools

1. "You got me there, boys," is the expression on Chairman Jim Platt's baffled countenance as he struggles for the answer to a knotty problem.

2. "I once knew an old man who kept down mildew by paying 10c a gallon for—" Erwin Lehmann was saying when the flash bulb went off. The rest of the story would have to be told by Mr. Lehmann who ran the weaving discussion.

3. Henry Robinson, of Columbus, Ga., was in charge of the slashing session.

4. George E. Glenn (at left), superintendent of Pepperell Mfg. Co., Lindale, Ga., the new general chairman, and Ted Forbes, secretary of Cotton Manufacturers Association of Georgia, big brother to this group.

5. Joe Cobb, superintendent of Startex Mills, Spartanburg, S. C., and active in affairs of the Southern Textile Association, came a long way to sit in on this meeting.

6. A newcomer to Atlanta is Fred Still (left), superintendent of Exposition Cotton Mills, formerly superintendent of Mathews Mill, Greenwood, S. C. With him is H. T. Mahaffey, of Callaway Mills.

7. No technical meeting in the South could begin without the pencils and notebooks given out by Falls L. Thomason (bareheaded), southern district manager, and F. D. Jacoway, of New York & New Jersey Lubricant Co. Mr. Thomason's father began giving out pencils and notebooks in 1922 at the first meeting of this organization.

8. Ben Crawford, who teaches textiles at Alabama Polytechnic Institute—better known as Auburn, is secretary of the recently organized Textile Operating Executives of Alabama which will hold its first meeting, Nov. 9, at Auburn. Ben, who used to work at Springs Cotton Mills, Lancaster, S. C., graduated in 1932 from Clemson Textile School.

9. "Have you heard the one about . . .?" might be the title of any picture involving Erwin Lehmann and W. M. McLaurine. The genial secretary of the American Cotton Manufacturers Association, once taught at Georgia Tech.

can be reduced by regular examination of tools and by urging the use of round-headed wrenches instead of the open-end type. Outlaw bolts which do not fit available tools often cause accidents. One company reported that it furnishes standard tools for all fixers, checking these for loss and wear at the end of each shift; very lew losses of tools have resulted since this system was installed.

There was a wide difference of opinion as to the number of yards necessary to make a bunch on the quill. Medium numbers, it was agreed, require 6 or 7 yd. of filling, or four to six picks across the warp. On coarser numbers, less filling is used, or the bunch will be too large. One member insisted that the bunch is unnecessary, except as a filling reserve, since the feeler does not slide on it. With further reference to feelers, it was alleged that the use of a special feeler man, who does nothing but check feelers and flag looms which are not working properly, has cut seconds in half in at least one instance.

W. H. Gibson, Jr., superintendent of Martha Mills, Thomaston, Ga., reported that tape on both sides of the yarn and a leased pattern would keep warps straight on tying-in machines.

Of several suggested methods of keeping tab on broken loom parts, the one which created the most favorable reaction was for the loomfixer to bring the damaged part to the second hand, who passes on it and then sends it to the supply room where it is checked a second time for replacement. A number of plants declared that they maintain separate bins for the loom parts used on each shift.

In changing over to larger loom beams several mills reported that it was necessary to set the beam back at least an inch from the loom. The change puts a greater strain on the gear, which may require larger teeth and ratio. A new beam lock is often necessary. It was pointed out also that the change might cause the let-off to tighten as the yarn runs out, but this can be overcome by shortening the lever arm and making other minor changes. It was asserted that a 26-in. beam holds 68% more yarn than a 20-in. beam.

Loom reeds, it was said, should be cleaned with a wire or bristle brush and stored flat in a cabinet. Powdered soapstone will help keep them from rusting. To remove, they should be lifted straight up rather than dragged over other reeds.

(*Continued on page 128*)

Adjusting Pulley Sizes

To give speed suited to material in process

TO SECURE MAXIMUM production it is necessary that machinery be driven at the speed best suited to the type of yarn in process. Therefore, on occasion, some machines may require speeding up, while others will require slowing down. On machines controlled by gears it is a simple matter to change speed, but where changes are controlled by pulleys, the task is more difficult.

Especially is this the case when fractional sizes in diameters of driving pulleys are desired. For instance, looms driven from 12-in. shaft pulleys can be speeded up merely by changing to a 13-in. pulley. But if it is required to increase the speed of the loom only two or three picks per minute, a 12¼-in. pulley may be required. Securing this desired diameter entails building up the 12-in. pulley by adding leather around the face. The same principle applies to a wide variety of machines.

Inexperienced workers can botch a leather build-up job by allowing lumpy spots, which cause erratic operation of the machine, to appear on the face of the built-up pulley. The aim of this article, and the accompanying sketch, is to illustrate a technique for applying the leather in a neat and workmanlike manner.

For example, suppose it is desired to build up a quiller pulley. First, remove the pulley from the machine. Then sand the face to remove all foreign substances. Next, drill holes around the face of the pulley to take the rivets which will be required to fasten the belt. At the point of join, there should be about 1½ in. between each of the three rows of rivets (shown as *A*, *B*, and *C* in Fig. 1). If the pulley is of the spoke type, two or three rivets can be placed in each row.

If the pulley is solid, building up is a more difficult matter, but can be accomplished by riveting around the edge. Place the pulley in a vise, in such a manner that the vise jaws hold the hub, allowing free movement of the leather. Rivet one end of the leather at point *A*, allowing the end of belting to extend over the center rivet holes, *B*. Trim this end down to a bevel. Now place glue around the pulley face and then wrap the leather around the pulley.

Make a stretching device, as illustrated in Fig. 2, from a couple of pieces of strap metal, nuts and bolts, and a short length of chain. Attach the clamp to the belting and, using a pinch bar, stretch the leather taut. Then rivet at *C*.

Remove the pinch bar and hang a weight on the clamp chain so that the leather will be kept tight until the glue has set. After the glue has dried, trim the leather at point *D* so it will fit the beveled edge as shown in Fig. 3. Cut the holes at this joint with care, making certain the ends are not broken. Carefully insert rivets at *D*, then proceed with the balance of the riveting around the pulley. All rivet holes should be countersunk so that the heads will be slightly below the surface. Battering the heads creates a poor and unsightly job.

Split pulleys can be built up by applying the leather to each half separately.

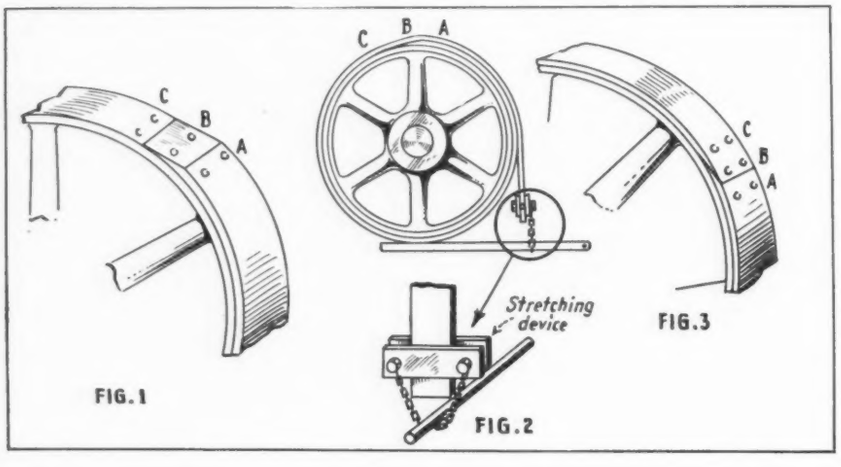


FIG. 1

FIG. 2

FIG. 3

Setting the Shear

To insure close shearing without pinholes

By DAVID WELSH

SMALL PINHOLES which are found in fabrics after shearing are usually due to improper setting of the carriage which carries the revolver and ledger blade. The rest and the point or cutting edge of the blade must be in correct juxtaposition to shear the goods properly and without damage. If holes are made by snipping small slubs or knots, a fault frequently blamed on poor or careless burling, a change of the position of the carriage will usually overcome the trouble. The shearing machine should be stripped of cloth, the revolver taken out and the ledger blade brought down to the back edge of the rest.

On a new rest that has not been filed, or has not been run so long that it has become rounded over, there is a definite place at the back of the rest where the edge of the ledger blade can be brought in perfect contact with it for its full length. The setting screws which control the distance between the rest and the cutting height for various fabrics are now run all the way down to allow the point of the blade to come down in close contact with the back of the rest. A narrow strip of thin paper is now inserted between the rest and blade to gage the closeness. If it pinches tightly all the way along, the juxtaposition is correct, with the edge of the blade resting exactly on the back of the rest. This is the setting position, but is not the best position for shearing, although some finishers leave the sheer at this setting and encounter no difficulty on some fabrics.

On other fabrics, particularly where close shearing is required, there is likely to be trouble from pinch holes. It is always safer to set the carriage back or down 1½ squares for goods up to 18 oz., and 2 squares for heavier fabrics. Setting the carriage back or down is accomplished by loosening the binding bolt at each side of the machine and turning the lowering and raising screw to the left 1½ or 2 squares—4 squares is a full turn of the screw; 2 squares, a half turn. Both binders should be loosened before turning the setting screws, and tightened again when the carriage is set. These screws control the moving of the whole carriage for the revolver and the ledger blade, and should not be confused with the screws that control the setting of the ledger blade. When the carriage is set back as described, any fabric can be safely sheared without making holes.

QUESTIONS & ANSWERS

Keeping Stripes Straight

Technical Editor:

We are having trouble in keeping our stripes straight on cloth knitted on our 40-feed machine. Will you please inform us as to the method used in keeping the stripes straight from knitting to sewing room. (8749)

Many knitting mills have found that a satisfactory way to overcome crooked stripes is to split the rolls as they come up the dry mast and sew the cloth so that the stripes come together at the seam. The fabric is then run through a machine that steams, spreads, and straightens the cloth.

Woolen Yarn Spinning Costs

Technical Editor:

Please give me some information regarding the cost per pound, scoured, of a medium grade apparel wool, and the cost per pound of a yarn spun therefrom. (8747)

There are a lot of variables here; however, take a 3/8 clothing length fleece wool, for instance, or a packer's B-Super Wool. To the cost of these add 10c. per lb. for dyeing, including material, labor, and expense. Labor and expense for mixing, carding, and spinning will run approximately from 5½c. for a one-run yarn to 11c. for a three-run yarn. Add 3c. more for labor and expense if the yarn is to be twisted two or more ply. Loss of stock, in dyeing, carding, and spinning, will run 5% or even more, depending on character of the wool, condition of equipment, skill in handling, etc. By taking in the various factors mentioned, and adding to them the cost of the raw wool, a fairly accurate idea of yarn cost can be arrived at.

Trouble in Coning Silk

Technical Editor:

We are having trouble with our silk, which our throwster has not been able to correct. This silk is a 2½ thread equivalent, wound at about a regular degree of tightness. But, it has a tight ring of silk around the top and bottom of cones; this makes the silk hang or stick as though the next layer were over the one just leaving the cone. The condition is very noticeable when the silk leaving the cones is rising to the top; however, it balloons freely in going toward the bottom. Any information you can give us to correct this trouble will be appreciated. (8738)

At first glance, it might seem that your trouble is due to a backlash in coning, but, if this is the trouble, it would be detected by the build of the cones. The most likely solution is in the distance between the top of the cones and the lead-off guides above them. Be sure that these guides are perfectly centered. If the centering is correct, then ascertain whether the guides are so close to the cones that they cause constriction at the top of the cones, yet allow the yarn to run freely at the bottom. Finally, ascertain whether the guides are so far from the top of the cones that an objectionable double, or even triple, ballooning results.

We would suggest checking to ascertain whether the trouble actually is sticking, due to liquid treatment of the cones during or after coning. Also, have your cones been tinted around the top? This sometimes causes trouble.

Preventing Rowey Cloth

Technical Editor:

I read the answer to Question No. 8673 on page 97 of your April issue and am taking the liberty of sending you another answer which may be of some benefit to your inquirer.

Any cloth woven with a white warp and a black filling will show warp streaks, no matter how carefully they are dressed; that is a foregone conclusion and cannot be avoided when there is such a contrast between colors of warp and filling. The light and heavy places filling way, or "rowey filling," can be helped a lot by careful weaving with a positive take-up, kept positive, and by great care in making start-ups after picking out. The least variation in picks makes a distinct rowey effect, hard to obliterate.

If the goods are to be fulled, the situation can be helped considerably by the proper application of soap. If the soaping is uneven, even for a few minutes, dry and wet patches and streaks become set and stay that way, showing up when the goods are finished. If a soaper is used, it pays to run the goods through twice, reversing ends on the second run. This gives an even distribution of soap so that every strand of warp and filling has the right amount, and the yarns draw together evenly, closing up and obliterating some of the roviness.

Another help is to double and cross the goods in the mill. If two pieces are run on each side, one piece on each side should be run in and the first end brought up and crossed over, the second piece sewed to the last end of the first, and both run in to near the end. Then the first end of the first piece is brought out and sewed to the last end of the second. This crossing helps to push warp and filling yarns together, more so than when pieces are run singly.

If soaping is done in the fulling mill by the can or pail method, it takes from 2 to 10 min. to get it all on; those are crucial moments for any piece of goods. The fastest and safest method of soaping at the mill is by building-in a soaping box large enough to hold five or six pailsful of liquid soap in each partition, with a hole and a plug in the center of each. The holes should be 7/8 to 1¼ in. in diameter, according to the liquidity of the soap. Load the mill with the dry pieces, ends sewed together, and run it around a couple of times to make sure there are no tangles. Put the plugs in tightly and add required amount of soap to each side. Start the mill, pull the plugs, and allow the soap to run on. In a surprisingly short time the goods are evenly soaped.

—David Welsh (N. H.)

Hairnets Bleed

Technical Editor:

We are inclosing one dozen hairnets mounted on cardboard. As you will note, the cardboard is stained either because of dye or oil. This occurs not only in our black nets, but also in browns. Will you kindly advise the reason for the staining and suggest method of correction. (8732)

There are many varieties of direct blacks on the market, which might have been used for dyeing the material of these nets, all of which would stand water or a moderate soaping. However, the dyer has used a dye which is quite deficient in fastness and bleeds out into water with a dirty brown color. There are also many browns available. Have the dyer get the type of direct black known as Direct Black E (C.I. 581). Dye at a boil, avoiding excess of color. Rinse well, aftertreat with 2% of formaldehyde at 120° F. to insure better fastness, then rinse again.

Filling Bands in Rayon Fabrics

Technical Editor:

We are having considerable trouble with bands in the filling showing up in various shades in piece goods after dyeing. We are experiencing this trouble in all-viscose as well as acetate and viscose cloths. Some pieces may have a great number of these

bands, others may not have any or only a very few. Sometimes the bands vary only slightly in shade, while others show a very sharp contrast. We are enclosing a sample showing a shade change in the filling, and would appreciate any help that you may be able to give us as to the cause of the bands as well as suggestions in dyeing methods to eliminate the bands. (8727)

It is impossible to state the exact cause of the defect unless the entire history of the yarn is known. However, filling bars are caused either by the use of filling from different batches of rayon yarn or by use of different batches of steam-set yarn. While rayon is much better today than it was some years ago, different batches from the same producer or batches from different manufacturers are still a possible source of trouble.

There are two methods in use for overcoming bars. The most commonly used means is to bleach with hypochlorite of soda before dyeing. Stripping with sodium hydrosulphite (the reverse of hypochlorite action) also serves the purpose in some instances. Another treatment which may be of help is to dye slowly, using very little salt.

There is one more possible cause of bars. Yarns are often sized unevenly. After dyeing, weaving, etc., the more heavily sized parts of the yarn may require a more thorough scouring to remove all of the starch or size residues. In some cases an enzyme treatment can be used for best results. If this is the actual cause, it can be verified by spotting the cloth with weak iodine solution. Excess of starch sizing will, of course, show up as a bluish or violet discoloration. Lack of starch shows up as a light yellowish stain.

Upholstery Fabric has Uneven Face

Technical Editor:

We are mailing you several samples of frieze upholstery fabrics. You will note there is a variation from side to side in the face of the cloth. We will greatly appreciate any advice you can give us as to the cause of this condition, and how it can be remedied. (8714).

The trouble with these cloths is in the drawing-in drafts, and in keeping the ends in a straight line. The pile ends should be well covered by the covering warp; on the back of these samples, one can plainly see pile ends. Pile ends which are not well-covered will make shorter loops, and these will show lines on the face of the cloth. It is our opinion the ground ends should each be drawn in a separate heddle. This would help to keep them from rolling over each other.

In addition, the pile yarn shows poor twisting; there are open places in the two-ply yarns taken from the samples.

Timing of harnesses is also important in producing satisfactory fabrics of this type. Ground harnesses should always be down in the bottom shed before the pile harness that is coming down. This gives the ground warp a better chance to cover the pile. The same thing holds true for the top piece, ground harness up in the top shed before pile harness. If two pieces are woven in the same time, two pile beams should be used. This will spread the pile ends more and help to keep them in a more even line. Most mills weaving this cloth on plush looms weave only one piece, the bottom one. But they use both shuttle boxes. The top box is used for the extra filling, that is later pulled out, and the bottom box is used for the binding filling. Better cloth can be made this way.

Examination of the back of the cloth seems to indicate that it was run over a rough roller in the finishing process, since the fibers in the ground warp are disturbed. A roller with sandpaper on it could do this. These cloths should always be run over rollers that are smoothly covered with suitable cloth.

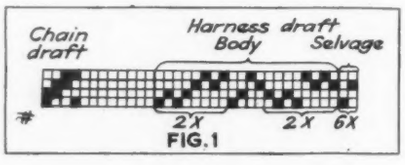


FIG. 1

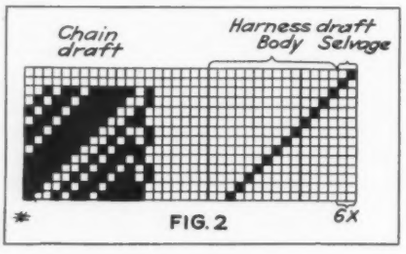


FIG. 2

Overcoming Selvage Difficulties

Technical Editor:

We are experiencing some difficulty with selvages of our woolen fabrics. As shown by the inclosed sample, the selvage ends weave in for a time and then float. This happens more or less regularly on this cloth, and I would appreciate your opinion as to the cause of the defect. Do you recommend extra harnesses for selvage? If so, how many ends on each side and what weave would you suggest? Is it advisable to double up the last few ends and omit the selvage entirely?

Occasionally, we have a fabric on which the sides roll or sag in during scouring. Would this be due to selvage trouble or improper tension on the loom? A fabric using a weave $\frac{5\ 2\ 1}{1\ 1\ 2}$ *with 18 picks per in. also rolls. What would be the best selvage for this cloth? (8733)*

In order to avoid selvage floats on the fabric submitted, we would suggest drawing 12 ends on each side through the first and third harnesses, alternately. Then, the body of the fabric could be drawn 1 to 8 straight, or as indicated in Fig. 1, accompanying. The selvage on the other side of the cloth should likewise consist of 12 ends drawn alternately on the first and third harnesses. The two outside ends of selvage should be double, and the selvage should be reeded the same as the body of the cloth, not crowded. Your present trouble is due to the fact that outside selvage ends are drawn through the wrong harnesses. Little or no difficulty should be experienced in adjusting the ends to give a perfect selvage.

As regards your second question, relative to selvages rolling on the edges, we would suggest that the cloth be tacked face inside (sewing the edges together) before fulling. If this procedure is followed, it is reasonable to believe the trouble will be overcome and a perfect edge obtained. Fig. 2 shows another weave suitable for this fabric. However, it requires two extra harnesses for the selvage.

Knitting Wool on Tricot and Milanese Machines

Technical Editor:

We have endeavored many times to use wool yarn, or wool in combination with silk and other fibers, for knitting on tricot and milanese machines. We have gotten very poor fabrics, the imperfections consisting mostly of places where the yarn thins out. We find that fuzz bunches up in back of the guides or the needles and thins out the yarn, in some places so much that it breaks. We would like to know if you know of a substance or a method of treating this wool yarn so that this fuzz would be laid back against the yarn itself and give us a surface like that of a rayon or acetate yarn; and still be flexible and removable before dyeing.

The yarn would probably have to be treated by the spinner as we do not size our warp. However, perhaps we could rig up some sort of a trough to run the yarn through while we were making the warp. If you can suggest any means of overcoming this difficulty, we shall be most appreciative. (8736)

We believe the standard tricot and milanese machines are too fine gage, what with all their intermeshing parts, to carry a heavy yarn and still permit the fuzz to go through the guides and needles. On the other hand, if the yarn is brought down in fineness, it then suffers from weakness and resultant breakage.

As far as giving the yarns a heavy sizing, the trouble is that when so treated the yarns gum up on the warp. One way in which a wooly effect can be obtained, more or less satisfactorily, is through use of a yarn combining spun rayon and cotton.

LOOMFIXERS' MANUAL

COTTON SECTION—Chapter XII—Continued

By IVAR MOBERG

Filling Cutters

DRAPER-ROPER filling cutters are installed on many looms. Discussion of their adjustment, begun last month, continues below.

When the cutter has been made to cut the filling as the bunter just contacts the latch finger, check the loom for revocation. Move the shuttle a trifle out of the box, so that its tip will strike the shuttle feeler as the lay is moved forward. If the setting is correct, the latch finger will be depressed below the bunter by the action of the shuttle tip as it forces the shuttle feeler back. This will revoke the transfer, if the shuttle is not in correct position to take a bobbin. Now test for protection by moving the shuttle still farther out of the box, so that its widest part will be between the shuttle feeler and the box back, then moving the lay slowly to front center. At this point, the shuttle feeler should be free to move still further back, so that there will be a clearance between the shuttle feeler and the shuttle when the former is pulled back by hand.

A later development in this line is the Stafford filling cutter. This may be applied on any Draper loom. It is located directly under the battery, and cuts the filling close to the shuttle eye, so that the cut end is easily pulled out of the shuttle eye by the ejected bobbin. Fig. C83 shows a later model Stafford filling cutter with angular knife movement and Hooper knife-closing trip. Earlier models had straight knife movement and a knife closer arm on the transfer fork. The angular knife movement slackens up on the filling as the cutter returns to its normal position, and eliminates the tendency of the filling to break or pull out of the cutter before the temple cutter has had time to cut the filling at the selvage.

The setting of these two Stafford filling cutters is identical, with the exception of the knife closer. Therefore, description of the Stafford cutter will be confined to the latest type, except where otherwise indicated.

Since the Stafford cutter is often applied to old looms, both installation and setting will be described. If the cutter is already installed, ignore all steps which do not refer to the actual setting. If old shuttles without cutter holes are to be used, prepare them as follows: With the thread groove as center, lay out a rectangle, $\frac{5}{16}$ in. high and 1 in. long, on the front wall of the shuttle. The location of this rectangle should be such that the right-hand boundary is as near the shuttle eye as possible, or so that it will tangent the junction of the cutout for the bobbin and the shuttle eye. Now, drill a $\frac{3}{16}$ in. hole in each corner of the rectangle. Then cut out the wood inside the outline and smooth the hole with sandpaper. Care should be taken to preserve the curve of the holes in the corners; do not make the corners sharp, as this will weaken the shuttle and make splitting more likely.

Apply a new Stafford box front, and so adjust it that the shuttle lies free of it, from the hole for the cutter to the mouth. This is necessary in order to enable the cutter to lift the cut filling out of the shuttle box. With a Stafford cutter the box front may have to be set a little further out at the mouth and a little closer at the outside end than ordinarily. Adjust the loom to run well, before any further parts of the cutter are applied.

WHEN THE LOOM is in good running order, replace the old bunter on the lay with a Stafford bunter and see that it rests flush on the lay, with its free end against the box plate. It may be necessary to file the heel of the bunter until it just contacts the box plate. If the heel is too long, the bunter may snap when it is tightened.

Remove the old transfer stud, and replace it with the longer transfer stud to take the cutter. Also replace the old latch finger with one for use with the new cutter. Then readjust the transfer assembly. Hold the new latch finger in the path of the bunter, and move the lay to front center. Adjust the length of the latch finger until the transferrer has the usual clearance above the rings of the bobbin in the shuttle.

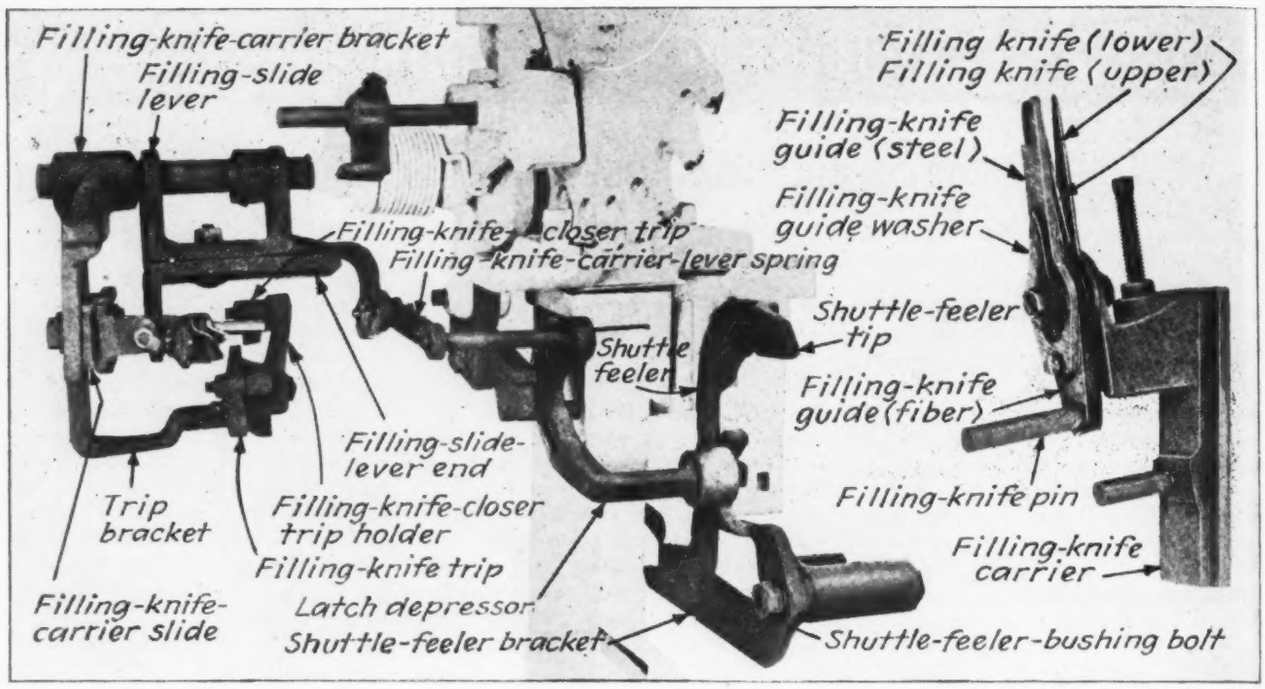
Lightly bolt the new shuttle-feeler stand to the loomside and, holding the latch finger up by hand, bring the lay forward until the bunter on the lay just touches the latch finger, with the shuttle in the right hand box. With the lay in this position, so adjust the shuttle-feeler stand on the loomside that when the shuttle feeler is in transfer position it will position the tip of the shuttle feeler $\frac{1}{4}$ to $\frac{3}{8}$ in. from the face of the box back (this setting varies with different widths of shuttles), and its underside $\frac{1}{8}$ in. above the lay end. The shuttle feeler should be horizontal after this adjustment is completed.

Check clearance between the outside of the shuttle feeler and the tip of a correctly positioned shuttle in the box. This should be $\frac{3}{16}$ in.; filing the blocks on the shuttle feeler stand may have to be resorted to to obtain it. The shuttle feeler must now be firmly against the stop, held so by the shuttle-feeler finger in transfer position. If it is not firmly against the stop, look for the following causes: shuttle-feeler finger set too low and/or the tip of the spring hook striking the shuttle-feeler hub. In the latter case, the tip must be filed off to clear the hub, or, if the shuttle-feeler finger is of the adjustable type, it must be sufficiently withdrawn for the spring hook to clear the shuttle-feeler hub by not over $\frac{1}{8}$ in. Guard against the spring hook being so short that it will slip off the stud on the shuttle feeler in transfer revocation. A weak spring-hook spring will also prevent the shuttle feeler from being pulled firmly against its stop.

Apply the latch depressor and turn it in the conical recess in the shuttle feeler until it will support the latch finger at the correct height in relation to the bunter on the lay, with the shuttle feeler in transfer position. Tighten the capscrew with the latch depressor in this position.

Shorten the filling-slide lever to the limit of the slot in the slide-lever end and so hang it on the transferrer stud that the end with the adjustable spring stud will be toward the center of the loom. Tighten the setscrew in the slide-lever collar, which goes on the same transferrer studs between the two support bearings of the filling-slide lever, so that the lever will be held in position, close to the transferrer spring collar, but without binding.

Remove the knife assembly from the filling-knife-carrier bracket and test it for cutting. Adjust the filling-knife screw until pressure by the knife-guide-



Copyright 1932, Draper Corp., Hopedale, Mass.

Fig. C83. Stafford filling cutter, with Hooper knife-closing device.

spring washer is just sufficient to make the cutters cut the filling cleanly and hold the cut end. It is important that proper cutting be obtained without too much pressure on the knife, which will make it move under excessive resistance. In this case, the cutter will not pass by the knife-opener trip and the cutter will not be in proper position to cut the filling at the transfer. If the cutter can not be made to cut the filling without excessive pressure, the lower and/or upper knives will have to be sharpened or replaced.

When the cutter has been properly adjusted to cut and hold the filling, insert it into the cutter hole in a shuttle in the box. Hold it so that the knife is at right angles to the lay and the adjusting screw in the knife-carrier slide is against the box front. Turn the adjusting screw until the point of the knife will be flush with the inside of the front wall of the shuttle. Tighten the checknut on the adjusting screw in this position. During this adjustment, it is important that the cutter be held so that the knife, not the knife-carrier slide, is at right angles to the lay.

Insert the knife assembly in the knife-carrier bracket and place it on the transferrer stud. Move the lay until the bunter on the lay just touches the latch finger, and so adjust the filling-knife-carrier bracket that the fully opened knife will be central in the cutter hole in the shuttle. The lateral position of the knife should be such that its center is approximately 1/3 the length of the cutter hole distant from the end of the hole nearest the shuttle eye. In this position, tighten the set-screw in the knife-carrier bracket and move the cutter back and forth in the cutter hole with the knife fully open, to make sure the knife does not strike the shuttle or the box front.

Move the filling-knife-carrier slide until the filling-knife pin comes directly above the filling-knife trip. Then, with the knife fully open, adjust the height of the trip bracket until the trip just touches the filling-knife pin. Tighten the capscrews in the trip bracket in this position. Close the knife and move it over the knife trip to make sure the knife will be just fully opened. Now, with the knife closed, move the filling-knife-carrier slide until the filling-knife pin comes directly underneath the knife-closer trip. Adjust the height of the trip stand until the trip just rests on top of the filling-knife pin; tighten the trip stand in this position. The forward position of the knife-closer trip should be such that it will close the knife as early as possible. However, care must be taken that it is not so far advanced that the filling-knife pin, when the knife is open, will not have fully passed the knife-closer trip when the cutter is in cutting position.

Now loosen the bolt in the filling-slide lever and extend it toward the knife-carrier slide, slipping the slot in the end over the stud in the knife-carrier slide. Pull the cutter as far back as it will go, and adjust the length of the filling slide lever until there is barely perceptible play between the end and the filling-knife-carrier slide. Tighten the bolt and make sure the cutter moves freely.

Move the lay until the bunter on the lay is 1/8 to 1/4 in. from the latch finger (on X-model looms, until the bunter just touches the latch finger) and place the knife-carrier-lever spring on the studs of the latch depressor and the filling-slide lever. With the adjusting screw in the filling-knife carrier against the box front, move the spring stud in the slot of the filling-slide lever until the knife-carrier-lever spring resists further movement. Tighten the stud.

The setting and adjustment of the cutter is now completed and all moving parts should be carefully lubricated. Move the cutter back and forth to make sure it moves freely and that the knife opens and closes as the cutter is moved between the two extreme positions.

* * *

Setting Picking Motions

Since publication of Mr. Moberg's chapter on Picking Motions (TEXTILE WORLD July, August, and September, 1939), Draper Corp. has announced a new rule for setting the pick on its X-family looms. The following data is from that company's "Cotton Chats":

There is a new rule for setting the pick on high-speed looms. The new rule sets up the distance of the reed from the fell of the cloth as the guide for timing the start of the pick.

The time to start the pick is when the shed is open just enough to let the shuttle enter without undue strain

on the yarn. The power applied should take the shuttle out just as the closing shed clamps down on it—but without damage to the selvage ends.

The position of the lay determines the size of the opening of the shed—when the opening is just enough to permit the shuttle to enter. On E-model looms it just happened that the top center of the crank coincided with a position of the lay which gave a suitable opening in the shed. X-family looms have the pitman point on the sword lower than on the older looms, bringing the lay farther back when the crank is on top center. Picking on top center on these looms gives a late pick, requiring extra power and speeding up the shuttle. Either may cause troubles on high speed looms.

When setting the pick on X-family high-speed looms, the distance from the reed to the fell of the cloth should be as follows: 2⅛ in. on X- and XL-models at normal speeds; 2⅜ in. on XD- and XK-models up to 180 picks per min.; 2⅛ in. at over 180.

With the lay in this position, set pick cam, pick ball, and lug straps as usual for starting the pick. Be sure the cam and hub are tight and that when set for the start of the pick there is no play in the parts.

At recommended loom speeds and a normal shed, this setting of pick-motion parts will give the proper power for driving the shuttle. If you need adjustments on high speed looms, start with the figures given. When you find the setting you desire, measure the distance from the reed to the fell of the cloth. In any adjustments, increase the power of the pick only as a last resort. Watch selvage ends to be sure the shuttle enters and leaves the shed cleanly.

RAYON AND SILK SECTION—Chapter V—Continued

By H. E. WENRICH

The Lay

LOOMS on which the raceplate covering is secured to the raceplate with two small recessed screws (as in *A* of Fig. RS22), should be carefully gone over before a warp is mounted. If the cloth covering is new, and happens to stick up 1/32 to 1/16 in. above the raceplate, shuttles may be thrown out of the shed when they come in contact with this sharp rise. Adjust the shuttle box to prevent this.

On looms having a plain shuttle box on one or both sides, the cloth is run nearly into the mouth of the shuttle box, as shown in *B*, Fig. RS22.

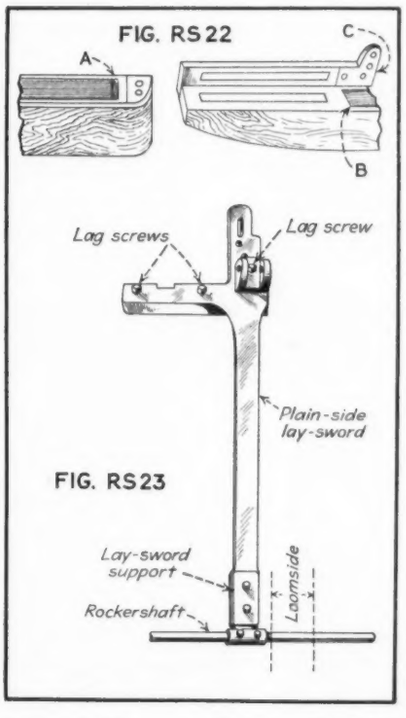
When the reed bed drops too low, it must be raised to prevent warp ends from cutting the raceplate covering, as well as to prevent the ends from cutting small grooves into the raceplate. To adjust the reed bed to correct height in relation to the raceplate, loosen the reed-cap holders and force a screw driver beneath the reed bed from the rear of the reed bed. Raise the bed so a straightedge placed on the glass rod lies flush with the raceplate when the crank is about a third the distance from back center. The reed will not be affected by this adjustment, unless it has been packed too high in the reed bed. The warp line will now be held up slightly by the rod; the amount should be between 1/32 and 1/16 in. above the back edge of the raceplate. This rod is held in place by small strips of brass, one on each side of the lay. When these strips become broken or damaged they should be replaced.

When the two screws holding the lay end in position come loose, cut a piece of warp paper or other strong paper to the proper shape and glue it over the brass end plate. This will keep shuttles from becoming cut along their bottoms.

Another source of trouble is the plate shown in *C*, Fig. RS22. This sometimes comes loose, and throws shuttles out of the loom as they come from the box. The plate should be in perfect line with the wooden back and the reed. When the screws work loose, slightly longer screws should be inserted.

In Fig. RS23 is shown a plain-side lay sword. Repairs described for one type of lay sword can be used as well on other types. Principles are generally the same, with the exception of later high-speed looms, which are accurately machined before leaving the factory. Some of these later looms require slightly different handling.

Some lay swords are fastened to the lay by means of lag screws at the two points shown at left in Fig. RS23. These screws, after long periods of use, may come loose. In such cases, it is advisable to discard the screws, whenever possible, using bolts attached by drilling completely through the lay. Another source of trouble is the lag screw shown at right of the plain-side lay sword. To replace this the crank-arm pin must be removed. Substitution of a bolt in this position is likewise feasible. A lock nut placed on the bolt will help avoid future trouble. Both lag screws and bolts must be kept tight to secure best results.



Figs. RS22 and RS23. Sketches showing parts of lay requiring frequent attenion by loomfixers

The lay sword is secured to a support, which is held in place by the rocker shaft. The shaft, in turn, is held in place by a bushing through the loomside. A sufficient amount of the rocker shaft is allowed to extend out for support of the picker-stick stand.

The required height for the lay in relation to the breast beam can be determined by placing a straightedge from the breast beam to the extreme forward position of the lay. Place a small block of wood 3/8 in. thick on the raceplate, then rest one end of the straightedge on the breast beam and the other on the block. Put a level on top of the straightedge and, when the lay has been adjusted either up or down as required to make the straightedge level, securely tighten the bottom bolts or other place of adjustment. The lay should not be raised or lowered for running a certain type of warp or shuttle; once it is in correct position, it should be kept there.

When troubled with center loops, it is well to check the height of the lay in relation to the breast beam. When it is too high, there is a tendency for the filling yarn to be pulled below the surface of the cloth. Bringing the lay into proper position will often eliminate the trouble.

STAPLE COTTON FABRICS

By JOHN HOYE
Fabric Technician with W. Harris Thurston, New York

This fifty-sixth installment of Mr. Hoye's series of articles on staple cotton fabrics—which began in the January, 1936, issue—continues the discussion of cut-pile fabrics

Velveteen

THIS FABRIC can be distinguished from a velvet because it is always made with a filling pile and generally made of cotton. The pile is an all-over effect and is not more than ⅛-in. in length. One warp and two filling yarns are used. Combed ply warp yarns are used in the good qualities and single warp yarns in cheaper qualities. Filling yarns are combed, have a soft twist, and are generally made from long staple Egyptian Benders or Delta cotton. Velveteen is constructed with a smaller number of warp ends than filling picks. The same filling yarns can be used for both ground picks and pile picks. In very high pick goods, a different and cheaper cotton is used for the ground. In this case the fabric is woven on a box loom.

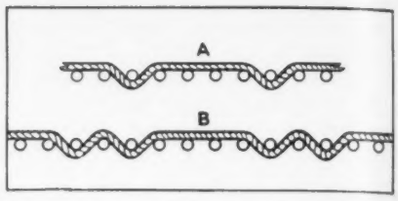
The weave used for velveteen pile is usually a twill, in which each pick floats over 3 to 5 ends for a short pile or over 5 to 9 ends or more for a deeper pile. The proportion is usually 3 or 4 pile picks to 1 ground pick. The ground filling may interlace with the warp in a plain weave (straight or "tabby" back fabric). In better grades a 2/1 or 2/2 twill ground weave is used ("twill back" fabric) and allows more ends and picks per inch.

In weaving velveteens, the method of interlacing, or binding pile picks with warp ends is important. Two types of weaves are used, "V" and "W," as shown in the figure. In the "V" weave each pile pick interlaces with 1 warp end; in the "W" weave each pile pick interlaces with 3 ends of warp.

The "W" type is stronger, ties-in the pile picks more firmly, and prevents the pile from being pulled out in cutting. When "W" type weave is used, the fabric is known as "fast pile."

Depth of the pile can be varied by using different length floats. Density of pile depends upon picks per in. A thick pile is obtained by using a large number of picks and a lighter or thinner pile by a lower number of picks.

Before cutting, a velveteen fabric is prepared in the same way as a corduroy. The face is treated with lime, or a similar substance, which gives a cutting edge to the fibers, and the back is stiffened by an application of starch or glue. Cutting is done by hand or machine. In hand cutting, several yards of fabric are stretched between rollers on a frame, and floats or races are cut one at a time. The operator uses a long-handled thin steel blade with guide attached. The guide opens up the race so that the floating pile yarn is tight against the edge of the cutting blade. In the machine cutting of velveteens, pieces are sewed end to end, face side out, to form an endless web of cloth. The operator, who sits in front of the machine, holds the cutting blade (and guide) against the cloth and cuts the races one at a time throughout the length of the web.



Weaves for velveteen: *A*, "V" weave; *B*, "W" weave

The cloth is run under careful tension, and various automatic stop motions are employed to insure safe cutting.

After cutting, the goods are scoured, brushed, singed, dyed, waxed, and finished.

Velveteens are usually piece dyed. They are also printed, usually in shepherd checks, stripes, etc. Waxing gives luster to the pile. A waxing machine consists of a set of boxes, each containing a block of hard wax, usually paraffin or beeswax. After waxing, several runs through a brushing machine give maximum luster.

The fabrics are sold in 22-in. width for children's dresses; 36-in. width for women's and children's jackets, skirts, etc., and in 54-in. width for upholstery draperies. Straight back or twill back is usually specified.

Hollow-cut velveteens are ribbed or corded velveteens with the appearance of corduroys. They are more expensive and considered to be superior to corduroys, because they have deeper, richer pile and more luster. They are woven as regular velveteen, with closely woven floats of filling pile, which are afterward cut in a special manner to form cords. In one method, some floats of filling yarn are cut straight, or vertical, and other floats are cut at an angle, or off center. In this way long and short tufts of pile are produced to form rounded cord effects. In another method, all of the pile is cut in the regular velveteen manner and the cloth then run through a special shearing process, known as "recess" shearing, in which the pile is cut or gouged out in vertical rows forming bevel-edged cords.

Examples of Velveteens

		Warp	Filling
23	in. 88x244	30s	40s, Straight Back
40	in. 72x500	20s/2	50s, Twill Back
39	in. 66x212	60s/2	36s, Straight Back
23½	in. 72x260	60/2	30s, Twill Back

Ends range from 72 to 92 per in.; picks range from 180 up to 660 picks per in.

Yarns used: Warp—combed 60/2 to 80/2, or 30s to 40s singles; filling—combed 30s to 70s singles, soft spun.

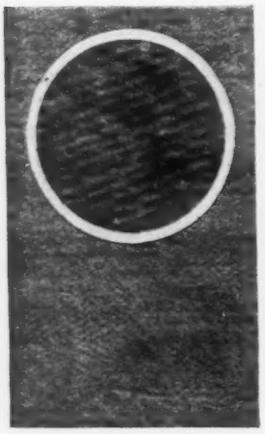


Figure at left shows gray, uncut velveteen; 40 in., 80x360, 1.80 yd. per lb.

At right is same fabric cut, dyed, and finished—36 in. finished width

Hollow-cut velveteen; 36 in., 88x180 (60 ground, 120 pile), 9 oz. finished

TEXTILE PERSONALITIES

BRADLEY C. ALGEO

Bradley C. Algeo, enjoying one of his important spare-time activities

SEVENTY YEARS of life, all of them spent either being a boy or being with boys, have kept Bradley C. Algeo young. His smile is one of youthful *joie de vivre*. His well-groomed appearance might well be the envy of many a younger man. And his agile brain is at once the delight and despair of thousands of boys with whom he comes in contact as Assistant Dean of Philadelphia Textile School.

Mr. Algeo's connection with textile education has been a long one. On graduation from high school, he enrolled in the newly-formed textile school on the recommendation of one of his professors. His ability to impart knowledge was quickly recognized, with the result that he was doing teaching of one sort or another almost from the day he entered the school. During the first year he studied in the daytime, and taught in the evenings. In the second and third years, he taught both day and evening classes, with his own studies sandwiched in between. On graduation from the school he became one of its staff.

That Mr. Algeo's teaching has been successful is borne out by some 10,000 students who have gone out from his classes to achieve success in the industry. That he is a favorite with his former students is proved by the fact that the school's Alumni Association elected him its president for 39 consecutive years, until he refused renomination last year.

Although he has spent his entire professional life in America's third largest city, Mr. Algeo is a country boy at heart. As early as 1895, he left behind a city home and, with his bride, settled in Oreland, a country town some 14 miles from Philadelphia. There he still lives. Tending the lawn and keeping his shrubs in condition occupies part of his spare time. An active interest in civic, religious, and fraternal organizations accounts for more of it. The arrival about two years ago of a grandson, John Bradley Algeo—pictured with him in the accompanying photograph—brought a new interest which fills every last remaining minute of leisure time.

Above and over all these things, Mr. Algeo's pet hobby is travel. He has been through South America, Central America, the West Indies, Southern Canada, and all over the United States. In this, as in every other branch of his life, he is still looking forward to new worlds to conquer.

✦ ✦ ✦

ALICE C. MOORE

After business hours, Miss Alice C. Moore, secretary-treasurer of the National Association of Finishers of Textile Fabrics, usually can be found enjoying one of two diversions. On evenings when the Rangers are playing hockey in New York she can be heard cheering them on from the same grandstand seat in Madison Square Garden which she has reserved for several years. On other evenings the chances are that she will be making a slam in a duplicate contract tournament.

For about a year after graduation from school Miss Moore studied nursing, but forsook that profession to enter trade association work. Her first position was with the Association of Manufacturers of Window Shades & Shade Cloth. Harry E. Danner was secretary of that association and also of the National Association of Finishers of Cotton Fabrics. Subsequently, Miss Moore transferred to the latter association; was appointed assistant secretary in 1927, elected assistant treasurer in 1928, and became secretary-treasurer in 1933.

During her tenure of office the association has expanded many of its older activities; inaugurated a number of new services. Thus, the first color classification report issued to members in 1922 contained approximately 1,000 classifications; last year approximately 12,000 classifications were made. Exchange of statistics on finishing activity began with a limited group; now is on an industry-wide basis, with a larger number of participants than at any time except when required by law under the N.R.A. One of the most important of the newer projects which is now well under way is that on proper marking or labeling of finished goods. Another activity of the association of which Miss Moore is justly proud is its cooperation with various branches of the Army and Navy in solving problems relating to finishing of fabrics for military use.

Miss Moore is expert contract player, and ardent hockey fan

NEWS OF THE MONTH

Hosiery Wage Cuts Continue in South

About 20 southern full-fashioned hosiery mills, including a number of large units, have been affected by wage cuts which began some weeks ago in scattered parts of the South. Possibilities are that the remainder of the industry will be forced to adjust wages downward despite efforts on the part of leaders to maintain the present level. Result of this so far has been labor disturbances in only one or two spots. Although the union has announced that it will resist wage cuts in the South, the chances are that its threats will have little effect on the situation since there are only about half a dozen union contracts with southern hosiery mills. One of these is with a seamless mill and one expires in about six months. So far as is known, only one contract calls for specific wage payments, the others being more or less flexible.

It is pointed out by realistic mill men that a 10% reduction would amount only to about 25¢ a dozen pairs of hose or 2¢ a pair, which will not have any appreciable affect on consumer demands. They say that over-capacity is the real root of the trouble, although the present situation may have been precipitated by the high prices of silk some months ago and the dislocation of the market attending Nylon's introduction.

Production schedules and sales are somewhat better now than a few weeks ago. The wage cuts have not affected the seamless branch of the industry which is experiencing fair business at the present time.

STA Divisional Meeting

The fall program of the Southern Textile Association got underway on Oct. 5 with a meeting of the Northern North Carolina-Virginia Division at Spray, N. C. The theme of the meeting was "Good Mill Housekeeping, Safety and Quality." Luther H. Hodges, general manager of the Manufacturing Division of Marshall Field & Co., Spray, was the principal speaker, the subject of his address being "Training For Textiles." T. C. Pegram, vice-chairman of the division, was in charge of the meeting. J. O. Thomas is secretary.

Chemists & Colorists Meet in Georgia

W. D. Anderson, president, Bibb Mfg. Co., Macon, Ga., addressed the Southeastern Section, American Association Textile Chemists and Colorists at a meeting attended by some 200 members and guests, held in the new ball room of the Ralston Hotel, Columbus, Ga. Saturday night, Sep. 21.

Mr. Anderson made an impassioned plea for a vibrant national spirit, the essential feature of a successful national defense. He contrasted conditions today with those America faced at the outbreak of the first World War. The spirit of unrest, fear, and uncertainty today demands clear thinking and militant action if the American Way is to be perpetuated, he said.

Dr. Milton Harris of the Textile Foundation, Washington, D. C., gave an interesting account of the work on the molecular structure of the cotton fiber, in an effort to impart elasticity without impairing its strength. Dr. Harris spoke encouragingly of the outcome of these experiments by which they expect to enable cotton to meet on more nearly even terms the competition of wool and synthetic fibers.

Perrin N. Collier, research director Callaway Mills, LaGrange, Ga. and chairman of the section, presided. Among the guests present were M. R. Ashworth, publisher, Columbus (Ga.) *Ledger-Enquirer;* W. M. McLaurine, secretary, American Cotton Manufacturers Association; T. M. Forbes, secretary, Cotton Manufacturers Association of Georgia, who introduced Mr. Anderson; and many prominent textile executives of the Columbus area. It was announced that the next meeting of the section will be held Dec. 7 in Atlanta, Ga.

THIS APRON GOWN, quaint as a Godey print, is made in Eichmann & Hecht's Waltzlite, a fine faille weave taffeta of Eastman acetate rayon. A gown for the fall wedding party or for evening wear.

THE SPEAKERS TABLE at A.A.T.C.C. Sectional meeting in Columbus, Ga. Left to right: W. D. Anderson, President, Bibb Mfg. Co., Macon, Ga.; Perrin N. Collier, Chairman, Southeastern Section, A.A.T.C.C., LaGrange, Ga.; Dr. Milton Harris, Director of Research, Textile Foundation, Washington, D. C.

New Foundation Members

Three new members of the board of directors of the Textile Foundation were inducted into office at a meeting Sept. 19. They are Claude R. Wickard, Secretary of Agriculture; Jesse H. Jones, Secretary of Commerce and Federal Loan Administrator; and Donald Comer of Birmingham, Ala., who was appointed on Aug. 15 by President Roosevelt to fill the unexpired term of the late Stuart W. Cramer. Resolutions

expressing their profound sorrow at the death of Mr. Cramer were adopted by the directors at their meeting.

Frank D. Cheney was elected treasurer. He has been a member of the board since 1933. Franklin W. Hobbs is chairman and Edward T. Pickard is secretary.

Greenville Cotton Festival

The second annual National Cotton Festival was held Oct. 3 to 5 at Greenville, S. C. Features were a gigantic style show in which over 1,000 high-school girls participated, a parade of floats, a large exhibit of cotton products and two coronation balls. Details will be published in a later issue.

Print Cloth Case

The Department of Justice case against print cloth manufacturers was scheduled at this writing to begin Oct. 14 in the Federal District Court at Greenville, S. C. Before the recent Madison oil case decision in favor of the Government, a jury could find restraint of trade, or "reasonable restraint," on the basis of intentions of the defendants. But now, there is either restraint or there isn't. Questions to be proved by the Government, according to our Washington correspondent, boil down to three: (1) did the defendants get together in violation of the Sherman Act; (2) was their purpose to affect prices; (3) did their action affect prices? Attorneys of the anti-trust division of Justice in Washington said they did not know whether the defendants would ask for continuance, but there were last minute rumors in the South as this issue went to press that the case might be carried over to another term of court. An account of the trial or postponement will be carried in the next issue.

ONE OF THE NEW COLLEGE FASHIONS. Knee-length skirt is in a Crown-Tested spun-rayon plaid fabric from Belding Heminway Corticelli; the hooded jacket is in a Crown-Tested spun-rayon and wool flannel from Taylor, Clapp & Beall.

MISS SUSIE DE SOIE, glamour girl of fashion and ventriloquist dummies, sponsored by the American silk industry brings news from the silk stocking industry to the American public. She is shown on the ventriloquist's knee wearing an evening gown of cerise silk satin designed especially for her by Peggy Morris of Bergdorf Goodman. She made her debut in Silk Parade week, Sept. 23 to 28 in the theater of the World of Fashion Building at the New York World's Fair before making a national tour.

Wage-Hour News

On Oct. 24 the maximum work week drops from 42 hours to 40 hours under the statutory provision of the Wage-Hour law. The 30¢ wage minimum does not change until the end of seven years from Oct. 24, 1938, when it becomes 40¢. . . . To avoid long delays, during which some firms go out of business or employees go away, every employer against whom an allegation of violation of the Wage-Hour law is filed will immediately receive a form to fill out, giving information as to his compliance or violation. This will have the effect of making every complaint a "live" one, right from the start. . . . Revised apprenticeship regulations provide that agreements may be approved "on the spot" by local joint committees as well as by State apprenticeship councils. Immediate exemptions for rates lower than the applicable minimum are made possible.

To Test Gotham Hose

In response to the growing consumer demand for information concerning merchandise purchased, Gotham Silk Hosiery Co., Inc., has contracted with the Better Fabrics Testing Bureau, official laboratory of the National Retail Drygoods Association, whereby the Bureau will test the manufacture of Gotham stockings from raw silk and other fiber materials to the finished hose. The Bureau will keep a textile engineer in the Gotham mills to devote his full time to specification work and testing. The Bureau seal of "Qual.ty Tested" will be placed on the top of every pair of Gotham stockings.

Algeo Banquet Speakers

Lieut. Col. Vere Painter will speak on "Procurement of Textiles for the Army" at the banquet of Philadelphia Textile School Alumni Association on Oct. 18, at Philadelphia. Also on the program is Lewis A. Hird, of Samuel Hird & Sons, who will convey to Bradley C. Algeo, in whose honor the affair has been arranged, the appreciation of the alumni for his long service to textile education. C. L. Ederer, president of the alumni, will be toastmaster.

Experiments With Flax Show Progress

Experiments conducted at the Georgia School of Technology, Atlanta, Ga., during the last five years indicate the possibilities of the introduction of domestic flax into the textile field on a substantial basis. Dr. Harold Bunger, head of the chemical engineering department, and Chas. A. Jones, director of the textile school have charge of the experiments; working in cooperation with them is Dr. H. P. Stuckey, director of the Georgia Experiment Station, Griffin, Ga., where the flax has been cultivated.

Development of a substitute process

TEXTILE CALENDAR

Committee D-13, A.S.T.M., fall meeting, Hotel Pennsylvania, New York, Oct. 16 to 18, 1940.

Alumni Association of Philadelphia Textile School, testimonial banquet to Bradley C. Algeo, Penn Athletic Club, Philadelphia, Oct. 18, 1940.

American Association of Textile Chemists and Colorists, 20th annual meeting, Hotel Commodore, New York, Oct. 18 and 19, 1940.

Cotton-Textile Institute, annual meeting, Waldorf-Astoria Hotel, New York, Oct. 23, 1940.

North Carolina Cotton Manufacturers Association, annual meeting, Carolina Hotel, Pinehurst, N. C., Nov. 7 and 8, 1940.

Alabama Textile Operating Executives, Semi-annual meeting, Auburn, Ala., Nov. 9, 1940.

U. S. Institute for Textile Research, annual meeting, Hotel Pennsylvania, New York, Nov. 14, 1940.

Fourteenth National Exposition of Power and Mechanical Engineering, Grand Central Palace, New York, Dec. 2 to 7, 1940.

Southern Textile Exposition, Textile Hall, Greenville, S. C., March 31-April 5, 1941.

for the usual method of retting was announced last month. This is a combination chemical and mechanical process which degums and removes the wood from the fibers and prepares them for carding and spinning on the cotton principle. It is much more rapid than the old process of retting. . . . Mr. Jones says that while the experiments are encouraging, they must be carried out further before definite conclusions are reached as to the practicability of the project. In a pilot plant now in operation fabrics are being manufactured of mixed flax and cotton, flax and rayon, and of pure flax.

Rayon Wage-Earners Decreased

Manufacturers of rayon yarn and allied products, in the United States, reported a decrease in employment, wages, and production for 1939 as compared with 1937, according to preliminary figures compiled from returns of the Census of Manufacturers for 1939.

The wage-earners, primarily engaged in manufacturing, employed in this industry in 1939 numbered 48,332, a decrease of 12.3% compared with 55,098 reported for 1937 and their wages $60,029,523, were less than the 1937 figure, $65,291,053, by 8.1%. This decrease in the number of wage-earners and wages may be partially accounted for by the fact that the 1939 Census of Manufactures questionnaire for the first time called for a breakdown of personnel employed in distribution, construction, etc., separately from the manufacturing employees of the plant. It is not known how many of the wage-earners reported in 1937 were engaged in distribution and construction and how many were engaged in manufacturing. Employees of the plant reported as engaged in distribution and construction activities for 1939 are not included in this preliminary report but will be included in the final report.

The value of products of the industry for 1939 amounted to $247,065,556, a decrease of 3% compared with $254,697,216 reported for 1937.

Carolina Council's 20th Anniversary

Governor Clyde R. Hoey was the principal speaker at the twentieth anniversary meeting of the Carolina Cooperative Council held at Spray, N. C., Sept. 19. Luther H. Hodges, general manager of the Manufacturing Division, of Marshall Field & Co., introduced Governor Hoey. The Carolina Cooperative Council is composed of key men from the rank of the loom fixers up to the general manager and has a membership of around 500 men. The organization was formed in 1920 and has had a most successful history. Monthly meetings are held from September through May of each year, and during the summer a picnic to which wives and sweethearts of all members are invited. The December meeting is featured by a Christmas banquet.

The twentieth anniversary meeting was opened by J. O. Thomas, president, after which new officers for the coming year were installed. J. Frank Wilson, of Fieldale, Va., incoming president, took charge of the meeting following the installation. Other officers installed were D. A. Purcell, vice-president. W. B. Weaver, secretary, and the various committee chairmen.

"The Story of Cotton"

Bibb Mfg. Co., Macon, Ga., has published a fascinating booklet entitled "The Story of Cotton" in which all of the major processes in the production of cotton yarns and fabrics are clearly and interestingly told with both text and pictures.

But in addition to this manufacturing detail is included an insight into the human side of the organization. The keynote of this is struck by William D. Anderson, president, in a foreword to the booklet in which he states: "I think we make first-class goods in our mills. Better still we engage in the job of making folks here in our organization."

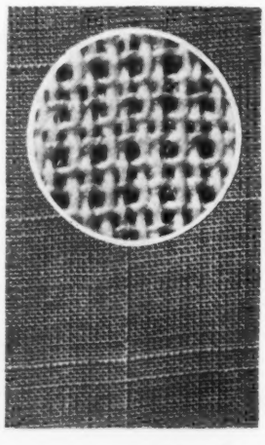
New Stamp Plan Area

Hartford, Conn., has been chosen as the sixth area in which the cotton stamp program to move cotton goods will be tried out. It is estimated that 4,741 families representing 14,000 people will be eligible to take part in the program.

The cotton stamp plan is already operating in Memphis, Tenn.; Springfield, Mass.; Minneapolis-St. Paul, Minn.; and Los Angeles, Calif. It is expected by the Department of Agriculture to have a half million people take part in the cotton stamp program before the close of the year.

Kannapolis a la Williamsburg

Every traveler whose way leads to Williamsburg, Va., is impressed with the restored beauty of that old colonial town, but few are inspired to do anything about it. But one of the few is Charles A. Cannon, president of the Cannon Mills Co., who became so interested in Williamsburg type of architecture that he has decided to rebuild his mill village of Kannapolis in the Williamsburg manner. The cost of this gigantic project will probably run into several million dollars before work is completed, but the work is to be done in an unhurried fashion. C. E. Swanson Associates of Chicago, Ill., have made a complete survey of the city's business section as it is today and have



The above spun rayon fabric has entered its fifth year of production. Over 17,000,000 yd. of this fabric have been sold in the gray. It is Style No. 2799 of Deering, Milliken & Co., made by Abbeville Cotton Mills, Judson Mills and Laurens Cotton Mills, and when properly finished by a licensed converter it may be identified as a "Crown Tested Rayon Fabric". No. 2799 is said to be the first of the linen-like rayons for dress materials. It is also one of the first spun rayon to be made of mixed deniers, 3 denier being combined with 1½ denier to give a certain springiness. It counts 60x52 and is 40½ in. wide.

laid out a proposed business section upon which work will soon begin. This includes remodeling of all buildings now in use and as the town expands and new buildings are erected they will be built to harmonize with the general plan.

Cotton Crop Progress

The cotton harvesting season is much later than usual and ginnings through Sept. 15 represented about 47% of ginnings at the same time last year. According to estimates cotton ginned through Sept. 15 consists of 17% of strict middling white or better; 56% of middling white; and 23% strict low middling white and below. Cotton classed as spotted in color is about 2.5% compared to 11.9% last year.

Ginning to Sept. 16 included 1,804,490 bales of which 1,802,788 were upland cotton, 1,373 bales American-Egyptian, and 329 bales were Sea Island.

Authorities from the Mississippi Delta state that so far no $1\frac{3}{16}$ths and longer staple has been delivered to market. Genuine $1\frac{3}{32}$ths is selling at 13¢ a pound; $1\frac{1}{8}$th at 12¢; while DPL or $1\frac{1}{32}$th to $1\frac{1}{8}$th is selling from $10\frac{1}{4}$¢ to $11\frac{1}{2}$¢ a pound.

Palm Beach Extends Line

In addition to the regular lines of summer clothing made by the Goodall Co. in its weaving plant and its clothing factory, the 1941 offerings will include garments in somewhat different price brackets, a "de luxe" line. The higher price numbers, it is understood, will be woven from worsted and mohair in cooperation with the Botany Worsted Mills. New price on the regular line for spring 1941 is $10.65 wholesale, $17.75 retail, up 75¢ and $1.25 over the 1940 prices. The de luxe line will sell at $19.50 wholesale and $32.50 retail.

Chemists Complete Plans for Annual Meeting

The program for the annual meeting of the American Association of Textile Chemists & Colorists, to be held Oct. 18 and 19, at the Hotel Commodore, New York, includes presentation papers entered in the Intersectional Contest and two symposia—one on evaluation of the properties of finished textiles, and the other on chemical and dyeing aids for the textile industry. The following papers entered in the Intersectional Contest are to be presented on Friday afternoon: "Development of Hosiery Processing in the South," South Central Section; "Informative Textile Labeling," New York Section; "An Analysis of the Split-Bath Method of Dyeing Silk Hosiery," Midwest Section; "Screen Printing in the South," Piedmont Section; "Some Observations on the Tendering of Vat and Naphthol Dyed Army Duck on Total Exposure to Weathering," Southeastern Section; "Variables Encountered in Fade-ometer Testing," Philadelphia Section; "Effect of Modern Finishing Agents on the Light Fastness of Cotton Colors," Rhode Island Section; "What Is New in New England," Northern New England Section.

On Saturday morning the following papers will be presented on evaluation of properties of finished textiles: "Wear and Porosity," by Erwin J. Saxl, of the Saxl Instrument Co., Inc.; "Use of the Black Carpet Beetle in Testing of Mothproofed Materials," by Ruth E. Slabaugh, of the Department of Entomology, University of Missouri; "Simple Apparatus for Testing Fireproofed Fabrics," by Emily W. Akin and Alfred R. Macormac, of Alabama Polytechnic Institute; "Report of the Committee on Crease-Resistance and Permanency of Finish," by Kenneth H. Barnard, of the Pacific Mills Print Works; "Evolution of Water-Resisting Textile Finishes," by George A. Slowinske of E. I. duPont de Nemours & Co. Coincidentally will be presented the following papers on chemical and dyeing aids: "Shrink-Proofing of Wool With Bromine," by Ralph L. Ericsson, of Warner Chemical Co.; "Some Uses of Tetra Sodium Pyro Phosphate in the Textile Industry," by Paul Logue, of Monsanto Chemical Co.; "Dyeing of Nylon with Acid Colors," by P. H. Stott, of E. I. duPont de Nemours & Co.; "Surface Active Agents in the Degumming of Silk Hosiery," by O. M. Morgan and H. Seyfreth, of National Aniline & Chemical Co.; "Microscopic Observations of Wool Dyeing—Part II," by G. L. Royer and H. E. Millson, of Calco Chemical Division, American Cyanamid Co. The annual banquet will be held on Saturday evening, and on Sunday a luncheon will be held at the National Advisory Committees' building at the New York World's Fair.

COTTON PRODUCTS are now used by the Victor Fertilizer Co., Chester, S. C., as souvenirs and gifts to customers, who are to large extent cotton farmers. The pair of pot holders carries a greeting card offering best wishes for a prosperous 1941 and urging "Use More Cotton Goods." Each holder is also stamped "Use Victor Fertilizer." The towel, a Cannon product, carries the same slogan jacquard woven from end to end. The Victor company also has printed face towels of cotton for similar promotional use. . . . Incidentally, R. A. Oliphant, president of the company, is brother of the late Albert D. Oliphant, who for many years was southern manager of TEXTILE WORLD.

Celanese Corp. to Produce Strong Acetate Yarn

Production of high-strength acetate rayon yarn will be started in the new plant of Celanese Corp. of America, at Celco, Va., as soon as the necessary special equipment can be installed, according to trade reports. This type of yarn has been produced for some time in England under the name Fortisan. As noted in our September, 1939, issue, this yarn, according to the manufacturer, has a higher tensile strength than that of any other natural or synthetic fiber. It is expected that initial production of the yarn will go into such uses as parachutes, high-strength cordage, powder bags, filter cloths, conveyor and transmission belting, and, possibly, tire cords. It is stated that the British are using this type of acetate in the manufacture of the "umbrellas" and the cordage of their parachutes.

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Greater Confidence Shown in Cotton Goods

After further hesitation early in September, the cotton goods market resumed its forward movement by the close of the month. Sales of print cloths were estimated at twice current production and consumers were freely paying advances of ⅛¢. The rise from recent lows is now about ½¢. per yard on principal print cloth constructions.

Colored goods were strong last month, and large sales of denims were reported. Given opportunity to cover until Dec. 31, overall and other manufacturers placed business freely. Percales were advanced ¼¢, and muslins were up fractionally.

Wool Goods Appreciably Better

Toward the end of September the atmosphere in the wool goods trade turned distinctly better as the large backlog of Army business made itself more definitely felt. Civilian business for fall has been going forward, and two advances of 2½ to 5¢ each have been registered. The situation in raw materials, particularly tops, is tight. The New York market for spot tops was up over 25¢ from the recent low. The spot price, which was $1.04 at the end of August, touched $1.23 at the end of September.

The trade foresees in British control of South African wools a good reason for expecting higher prices. Some mills are sold up on goods until the first of the year, and distributors feel that foundation for a strong movement is being laid.

Rayon Market Continues Strong

When the leading yarn companies opened their October production early in September, it was reported that there was the usual heavy interest on the part of buyers. Definite scarcities are said to exist on such counts as the 150-denier, 40-filament bright, the 100-denier pigment rayon, and some of the finer deniers. Because of production loss due to a strike at a leading acetate plant, there are fears among buyers for further tightening in deliveries. The fact that rayon greige goods mills have lengthened their terms from 30 to 60 days has had a stimulating effect on demands from converters, and fabrics in the uptown New York cloth market have been active. Knitters have also taken more yarn than in the past. Rayon jerseys are said to be getting a new upturn in the better-class garment field.

Raw Silk in a Maze

Threats of embargo by both Japan and the U. S. strengthened raw silk market after it had dragged along from week to week with little change in quotations. Recent figures have been near the Japanese minimum, and domestic users showed more interest in Crack Double Extra 78% around the $2.55 and $2.60 levels. Further efforts are being made in Japan to stimulate domestic use of silk and after Oct. 1 it is regulated that a percentage of silk must be mixed in nearly all textile materials. It is said that this phase of Japan's campaign should result in consumption of at least 100,000 bales of raw silk.

As a result of the active campaign under the sponsorship of the International Silk Guild, the annual Silk Parade stimulated considerable interest in silk fabrics. The quality cutting-up trade is also showing more interest in silk, due in part to a feeling of responsibility which has fallen upon some American designers as a result of the absence of Paris from the international market. If Japan's belligerency boils

over, the trade foresees new consumer boycott-for-silk movements, and the future, as a result of uncertainties, is hazy.

Hosiery Market Divided

Those mills which are able to turn out cotton or woolen socks for military use have benefited by large orders in recent weeks. From June 1 to Sept. 15 the Government bought 9,249,407 pairs of cotton socks and 8,977,105 pairs of lightweight woolen socks. In sections of the industry that rest on civilian business, the situation is slow, and full-fashioned goods, specifically, are moving irregularly. There is some pep to the Nylon division of the market since most makers of these lines eliminated their lower prices and made advances of from 75¢ to $1.50 per dozen. This means that the former retail bracket of $1.15 per pair has practically disappeared, and the goods will be offered from $1.25 or $1.35 up.

Underwear Brightened by Army Business

Army business in the underwear field has aggregated 17,750,000 garments from the first of the year through Sept. 17. The volume of military business represents a considerable proportion of the production-capacity on type of garments involved, and, with an average fall trade, there may be some scarcity of heavy shirts and drawers. Undoubtedly, the heavyweight season will be one of the most successful in recent years.

Last month certain lines of men's underwear were opened for spring, 1941, at prices showing little change from those of a year ago, and the usual retail price brackets are consequently maintained. Doubtless buyers will recognize the attraction of these unchanged prices, and the knitting trade expects a good initial business from spring.

Knitted Outerwear Outlook Encouraging

Distribution this fall for various lines of knitted outerwear is progressing at a fair rate and the trade generally is encouraged to look forward to spring as another good season.

Swim suits are available for 1941 and such a house as Jantzen is showing more styles in the higher price brackets than ever before. Swim suit lines show wide choice of materials, including worsteds and synthetics, with liberal use of elastic yarn.

"Textile World Mill Directory," 1940

The 1940 edition of the "Textile World Mill Directory," published by Textile World Publications, 330 W. 42nd St., New York, has been issued. The new edition is completely up-to-date, incorporating in its 480 pages the thousands of changes in mill names, addresses, personnel and equipment which have taken place in the textile industry since the publication of the 1939 edition. Price is $3.00 per copy.

As in previous years, the 1940 edition consists of two parts. Part I contains an alphabetical index to the textile establishments of the United States and Canada. Part II contains detailed information about each mill and is arranged by location, alphabetically by States, cities and towns, with maps on which textile mill towns and cities are indicated. The mill listings contain such information as address, capitalization, principal officers and buyers, products, kinds of yarn bought (if any), principal machinery and power equipment, and data on the mill's sales policy.

For easy reference, the name of each mill in Part II is followed by a type symbol to indicate the mill's principal product-activity.

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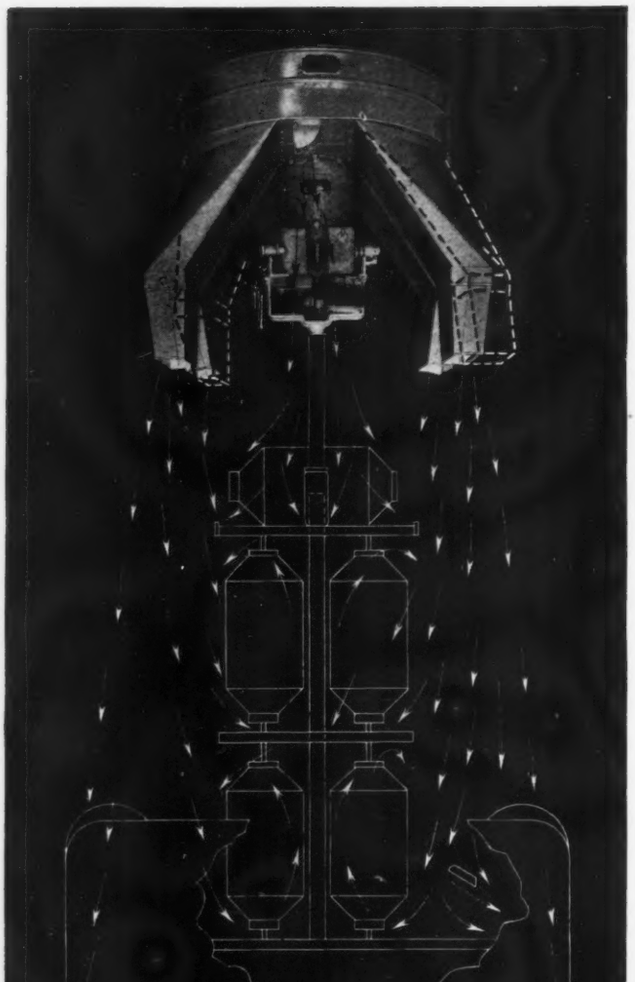

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This and That

North Carolina Cotton Manufacturers Association will hold its 44th annual meeting at the Carolina Hotel, Pinehurst, N. C., on Nov. 7 and 8. The business sessions will take place on the second day, being concluded with the annual banquet.

Waterproofing of Nylon is covered in a patent granted this month to Paul R. Austin and assigned to E. I. du Pont de Nemours & Co. The method consists of impregnating Nylon fabrics with stearamidomethylene pyramidone chloride or a similar compound, followed by baking.

The site of the first cotton mill in Utah is now marked with a monument, unveiled on Sept. 18. This mill was built in 1863 at Springville, and was later converted into a woolen mill. The monument was set up by the Daughters of Utah Pioneers Committee.

"Football Through the Years" by Dean Hill, president of the Durene Association of America, has been published by Gridiron Publishing Co., 470 4th Ave., New York, at $2.50 per copy. This is a pictorial history of American football and has been excellently received.

Eli Whitney was honored by issuance of a postage stamp on Oct. 7. This stamp, which is 1¢ denomination, is one of the inventors' group of the series of 35 stamps prepared to commemorate American "heroes of peace."

National Retail Dry Goods Association has appealed to its 5,700 member stores to get the signatures of their buyers on a "buyer's pledge" to resist any move to advance price levels unreasonably in the wholesale market.

A new type of shingle is reported to have been devised by J. H. Hardy, at Columbus, Miss. Its base is black felt, its top is cement and between them lies an important layer of cotton. It is said that the shingles can be made upon a building site and laid wet, 10 or 15 minutes after making. They are described as a potentially important new use for cotton.

Production of Lanital in Italy fell off 50% between the years 1938 and 1939, according to reports, not so much due to encroachment of other fibers upon this chemical approximation of wool, but due to the lack of milk from which the casein for its manufacture is derived.

Calcutta mills received a British Government order for 58,000,000 sandbags made of burlap early last month which jumped the price of burlap about ½¢ per yard.

Full-Fashioned Hosiery Manufacturers of America held their annual meeting in Philadelphia Sept. 10. C. V. Williams, Federal Knitting Mills; L. H. Greenwald, Interstate Hosiery Mills; Irving K. Hessberg, Van Raalte Co.; Roy E. Tilles, Gotham Silk Hosiery Co., were elected directors.

In our Washington story on Textiles for Defense, page 67 of the September, 1940, issue, mention was incorrectly made of a 29-oz. and a 32-oz. bleached drill under Navy requirements. This was a typographical error and the drill should correctly have been described as 29-in. and 32-in.

A new cotton tire cord with 300% longer flexing life than conventional cord of the same size is announced by the National Cotton Council. The new cord is the result of three years of study by Dr. R. F. Nickerson at Mellon Institute, under the auspices of the council.

The first conveyor belt ever to be made of 48-oz. duck has been produced recently by U. S. Rubber Co., according to a recent announcement.

Heat-Resistant Process

For making cotton tire cords adapted to textiles for aeronautical use

IT HAS BEEN ANNOUNCED recently that the HR process originally developed by Bibb Mfg. Co., Macon, Ga., for making cotton cords for heavy duty tires, V-belts, and similar products has been adapted to manufacture of cotton yarns for parachute harness and other textiles for aeronautical use. Heretofore parachute harnesses, life-lines for supporting gunners in fighting planes, shroud lines, bomb slings, and target harnesses all have been made of high-grade linen yarns produced from flax grown outside the United States. With imports of flax cut off, the necessity arose of finding a satisfactory substitute for linen yarn.

Webbings made from a special type of cotton yarn which had been subjected to the HR treatment were submitted to the authorities at Wright Field and later to the aeronautical department of the Navy. Experimentation is said to have resulted in the production of webbings suitable for parachute harnesses and other aeronautical equipment that exceed in tensile strength the webbings heretofore made of linen.

The heat-resistant process used in making this yarn is described as an original method of softening the gums inherent in all cotton fibers and keeping them soft during the processes of manufacture where they are kept under compression and tension. The gums are then allowed to set, with the result that the fibers are bonded together in a way which prevents slippage of the fibers and secures the maximum strength inherent in the cotton fiber. The yarn produced for aviation purposes is known as SCAL-HR yarn.

In the past largest quantities of flax have come from certain districts in Belgium and from Russia. Now exports of flax from those countries to England and America have been stopped. Although England can obtain some flax from Ireland, the supply from that country is inadequate, and already the British have sought something here in America which would be an adequate substitute.

The HR yarn produced by Bibb Mfg. Co. is made of American-grown cotton, especially selected for length and toughness of fiber. Development of this yarn is said to make the United States independent of all foreign sources of supply of raw materials for military textiles of the types mentioned above and to put this country in a position to supply England with any deficiency which may occur there.

WEBBINGS for parachute harnesses made from HR cotton yarn are said to have a greater tensile strength than those made from linen.

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Georgia Mill Essay Contest

Association sponsors awards, in new public relations program

UNDER THE SPONSORSHIP of the Cotton Manufacturers Association of Georgia, a Georgia Educational Scholarship Essay Contest is now being presented to the schools of the State. As the result of this contest, two Georgia school students are going to college free; 18 other students in Georgia schools are going to have cash for educational purposes; and 40 more Georgians are going to have other valuable educational awards. The contest is based on essays on the subject, "The Importance of the Cotton Mills to Georgia."

To make the contest equally fair for entrants of all ages, two separate groups of prizes will be awarded—one for high school students and another for grammar school students in the fifth, sixth and seventh grades. The State has been divided

Norman Elsas, of Fulton Bag & Cotton Mills, who is chairman of the Public Relations Committee of the Cotton Manufacturers Association of Georgia

into ten districts corresponding to the ten Congressional districts in the State and awards will be made in each district. The first prize in each group consists of a two-year all-expense scholarship at a Georgia college or university. In addition to the two grand awards, additional prizes will be given the winners and runners-up in each of the nine remaining Georgia districts. Awards will also be made to teachers of the winning students.

The program has been in process of preparation for quite a long time. The planning and execution of this public relations program is under the direction of the association's Public Relations Committee, of which Norman Elsas of Atlanta is chairman.

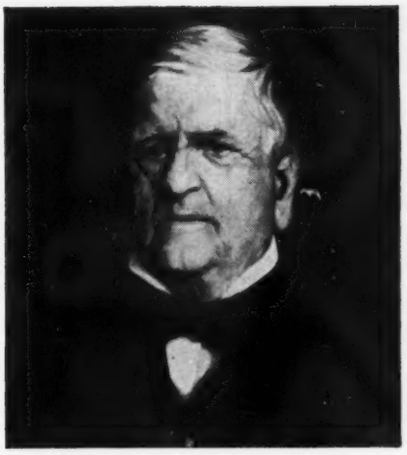
M. D. Collins, State Superintendent of Schools in Georgia, commented on the contest as follows:

"The Georgia Educational Scholarship Essay Contest appeals to me as an outstanding public spirited educational project which should stimulate the best competitive talents and efforts of the boys and girls who attend our schools.

"I am gratified to note that every phase of the judging will be entirely in the hands of Georgia educators.

"The College Scholarships and Cash-For-Education Awards for both students and teachers are extremely valuable.

"The generosity of the sponsors in launching an educational project of this nature warrants the support of our schools, our teachers, our students and their parents."



SALT OF THE EARTH

Fifty years ago a man sat in a Pittsburgh office and pondered a need. He was Captain John B. Ford, father of the plate-glass industry in America. His need was for soda ash. Out of this need, and out of an irresistible urge to take the basic raw materials of the earth and translate them into useful products for the service of mankind, he decided to found a chemical company.

It was a venture into a new field. Captain Ford was eighty years old. In the course of a long life he had applied his creative powers to the manufacture of many needs for a growing country: saddles for the American Army in Mexico, ships for commerce on the Ohio and the Mississippi, iron and steel for a rising industrial nation. . . . He had not only manufactured thousands of tons of plate glass, but he was the first to polish plate glass successfully . . . to make it commercially practicable.

Now he would seek other raw materials: salt, limestone and coal. He would combine them chemically and produce his own soda ash for his glass factories. He would be independent of all sources of supply. . . . Most important of all, he would be turning his restless energy to fresh fields.

Here was a challenge: Captain Ford met it characteristically. He purchased twenty acres of salt beds along the Detroit River in Wyandotte, Michigan, and there began the production of brine. On these twenty acres he built his first small soda-ash plant. . . . He called it the Michigan Alkali Company.

When Captain Ford drilled his first salt well in 1890 he knew that the brine pumps would be working after his time. What he could not know was that fifty years later, in 1940, the wells he drilled would still be producing night and day . . . that instead of 20 acres and 10 wells there would be 300 acres and 50 wells . . . that more than 42 miles of piping would be needed to supply one of his plants alone . . . that more than 40 million gallons of water would be used every day . . . that his Michigan Alkali Company would become one of the great basic chemical companies of the world, manufacturing a wide range of different products, serving more than 50 different industries.

On its fiftieth anniversary, the Michigan Alkali Company can pay no more just tribute to its founder than to say that Captain John B. Ford builded better than he knew . . . that from his day to this, his company has continued in ever-increasing ways to translate raw materials, among them the salt of the earth, into useful products for the service of mankind.

50th ANNIVERSARY 1940

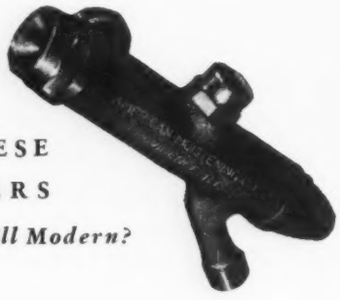
MICHIGAN ALKALI COMPANY

WYANDOTTE, MICHIGAN

SODA ASH • CAUSTIC SODA • BICARBONATE OF SODA • CALCIUM CHLORIDE • DRY ICE • LIQUID CHLORINE
CALCIUM CARBONATE • COKE • CEMENT • TAR • TOLUOL • BENZOL • XYLOL • CALCIUM HYPOCHLORITE

"When I'm wrong, the boss can't make money"

We quote the foreman of a well-known worsted carding room. "It costs real money to repair a poor carding job. Yes, the short fibres can be combed or drafted out . . . but costs are higher and the result isn't the same." See that *your* cards – the backbone of your mill – operate in a condition of Adequate Humidification, closely controlled. That's how Amco provides "money-making air."



WILL THESE ATOMIZERS ***Make Your Mill Modern?***

Many a mill has taken a big step forward by the simple replacement of old-fashioned atomizers with Amco No. 4 Self-Cleaning Atomizers! Completely self-cleaning, they supply a big volume of finely atomized spray, without drip or feathering down. Write for folder on them! American Moistening Company, Providence, R. I., Boston . . . Atlanta . . . Charlotte.

AMCO *Humidification*

Join in Cotton Promotion

Institute and Council in unified drive to increase consumption

COORDINATION of the promotion activities of the Cotton-Textile Institute and the National Cotton Council to provide a unified drive for increased cotton consumption was announced recently by Dr. Claudius T. Murchison and Oscar Johnston, presidents of the respective organizations.

Details of co-operation, perfected at meetings here, established a dove-tailed promotion program to be conducted for the cotton-textile industry by the Institute and for the raw cotton industry by the Council.

Presidents Murchison and Johnston in a joint statement announced that:

"In keeping with well-laid and carefully integrated plans, both organizations will engage during the coming year in their greatest programs to increase the consumption of American-grown and American-manufactured cotton.

Dr. Claudius T. Murchison, president of Cotton-Textile Institute

Oscar Johnston, president of National Cotton Council

"The promotion campaign was never more timely. Within recent days the Department of Agriculture has announced a crop in excess of 12,700,000 bales.

"In view of present domestic consumption of slightly less than eight million bales and an export outlook not in excess of two million bales, it is obvious that domestic consumption must be increased by more than two and a half million bales if equality is to be maintained, on the present basis, as between production and sale.

"The Institute's program is being financed by voluntary contributions by mills of two cents per bale on their consumption; the Council's by voluntary contributions of five cents a bale by raw cotton interests.

"While the total sum from these sources will be small as compared with co-operative appropriations by other industries, it is highly significant as a new peak of cotton promotional effort.

"We have now taken the final step of achieving necessary coordination and unity to give maximum power to the efforts of these two great branches of the American cotton industry."

Presenting

AMYLEX

—the Original

SLOW-CONGEALING STARCH PRODUCT

Made Expressly for Warp Sizing!

- The slow-congealing feature produces strong, smooth-surfaced warps, and eliminates crusting or lumping.

- Fats are either eliminated or greatly reduced—thus preventing flaking, excessive shedding, and loom breaks. Likewise, tensile strength is increased.

- Brighter, stronger colors are obtainable on dyed warps—owing to the transparency and uniform penetrating properties.

AMYLEX, being a thin-boiling starch, has the proper penetration, yet coats the fibres like an expensive gelatin or potato starch size. It is a pure form of modified starch, containing no chemicals nor fats, and is commercially uniform at all times. Its price is only 60¢ per cwt. over Pearl Corn Starch—the same as standard thin boiling starches.

Write us the amount you need for a trial. We will gladly send it on approval.

NATIONAL STARCH PRODUCTS Inc.

820 GREENWICH STREET, NEW YORK

SOLVING THE PROBLEM

• Waiting for money is expensive. It ties up your working capital. It keeps you from doing the volume you should. But, fortunately, there is a profitable solution: factoring. You are assured adequate working capital at all times, and, in addition, you are protected, against credit losses. Write us for the complete story — without any obligation to you whatsoever.

MEINHARD, GREEFF

AND COMPANY, INCORPORATED

51 MADISON AVENUE • NEW YORK CITY

Factoring Founded on Service

Weaving and Slashing

(Continued from page 107)

SLASHING PROBLEMS. One of the most interesting points brought out in the slashing session by Mr. Robinson dealt with top squeeze rolls riding off center. The main cause of this condition is wear on the journal and bearing. This wear can be relieved, it was suggested, by placing a $\frac{1}{4}$-in. brass plate and brass set-screws on each side of the bearing. This can be done without replacing the complete bearing and takes care of alignment, as well as wear. Several members suggested building up the journal, and asserted that leather or a wooden block under the journal will often help, at least temporarily, as will tying the rolls together with a rope.

The normal run-out on warper beams is from 15 to 30 yd., according to the majority of those in attendance. Uniformity of length can be checked by weight against the yardage. A surface counter on the front and back beams will do the trick. Variation should not be over 5 lb. per beam.

Bill Durst, left, was among the peddlers represented. George Snow, center, of Atlanta, is a veteran at these meetings. W. H. (Bill) Gibson, right, superintendent of Martha Mills, Thomaston, Ga., can be depended on to do his part.

Mr. Walker, of Pepperell Mfg. Co., Lindale, Ga., in discussing the weight of squeeze rolls in relation to their speed, some time ago took stock of his rolls which were operating at 27 to 30 yd. per min. He presented the following table:

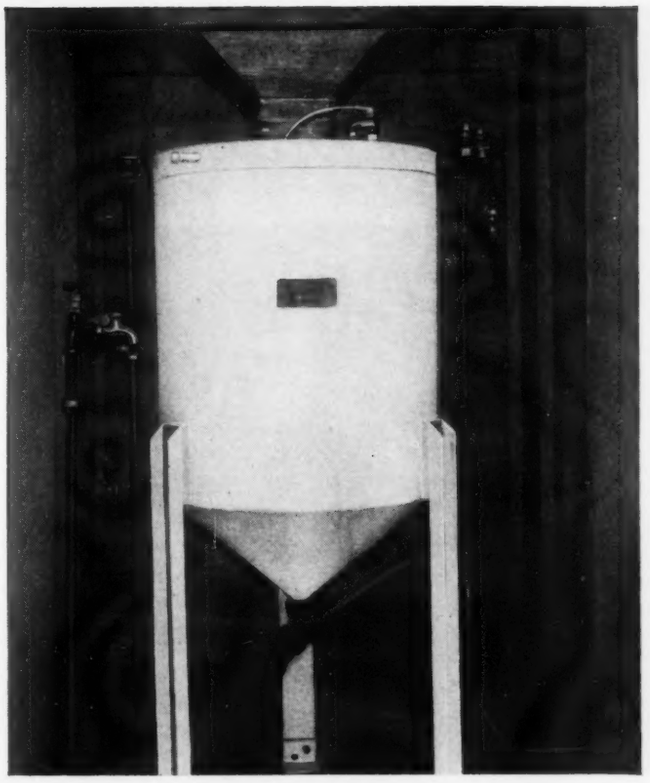
Roll Weight (lb.)	Percentage Size (Including Surplus Size)	Percentage Stretch
335	16.46	1.78
511	16.40	1.87
559	16.00	1.74
603	15.91	1.76
643	16.40	1.77
683	15.55	1.83

Result of this check-up was adoption of a 550-lb. roll, but since that time it has been found advisable to go to a 750-lb. roll, as his slashers have been speeded up to a maximum of 75 yd. per min. This higher speed is partly possible, he said, because the new starches are more sensitive. The new roll, incidentally, averages around 100-lb. accumulation of blanket size, etc. The slasher has two cylinders.

Loom beams can be prevented from rusting by painting with white lead paint or a thin lacquer and storing in a dry place. Scraping off of paint can be lessened by leveling presser-roll edges.

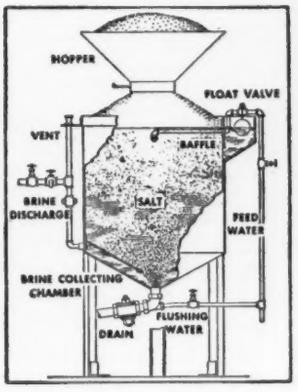
New officers of the association are: George Glenn, superintendent of Pepperell Mfg. Co., Lindale, Ga., general chairman; Erwin Lehmann, vice chairman; Floyd Watson, Griffin, Ga., member of the executive committee.

Rapid growth in dye house use of *Lixate Brine* is convincing evidence of its advantages and economy



WALKER COUNTY HOSIERY MILLS, Lafayette, Ga.

The Lixate installation illustrated above is one of a large number in textile mills located in almost every industrial area. Lixate Brine has proven its quality as well as its economy, in mills producing all types of fabrics in silk and wool, cotton and rayon, and mixed materials. In addition to its use in the dye house, Lixate Brine is also highly economical for regenerating zeolite water softeners.



ANY business executive as well as any textile mill superintendent, can see quickly why The Lixate Process For Making Brine can make big savings in plant operations. Its automatic operation makes at least four major savings in any mill. It has been difficult for some executives to believe that a process which makes such reductions in costs, can also improve the quality of the finished product.

Yet this is just as reasonable as its economies. For instance, Lixate Brine is introduced into the dye bath in liquid form and is immediately dispersed throughout the bath. This eliminates the streaking and spotting of fabrics due to concentrations of saline exhausting agents on the fibers. The "whiting" of edges is ended. Users report a finer and softer "handle" to their finished fabrics.

Yet these and many other advantages are provided by a process which makes four major savings:

1. Lower labor cost for handling salt.
2. Elimination of labor or power costs for making brine.
3. Reduction of costs by piping brine instead of carrying dry materials to points of use.
4. Saving of 10% to 20% in amount of salt used.

You can see why these savings are possible, by looking at this cross-section diagram. The proper grade of International's Rock Salt is placed in a hopper. It flows by gravity to the Lixator below. Water enters through a spray nozzle at the top, dissolves the salt without agitation and becomes fully saturated brine. This brine is self-filtered and crystal clear. It rises in the collecting chamber to a discharge pipe, and flows to a storage tank, where a constant supply is automatically maintained. Lixate Brine is crystal clear, bacteriologically clean and chemically pure beyond "pure food requirements," and is always uniform for it is always fully saturated.

★ ★ ★

The Lixate Book illustrates many installations and describes its operation in detail. Write for a free copy of this useful book.

● SALT FOR EVERY PURPOSE

The Lixate Process is a development of International Salt Company, Incorporated, producer of every type and grade of granulated salt (vacuum evaporated), flake salt (grainer evaporated), and Rock Salt. The advice and counsel of the Research Department of International Salt Company, Incorporated, is offered freely to all who use salt in industry.

● WRITE FOR THIS BOOK

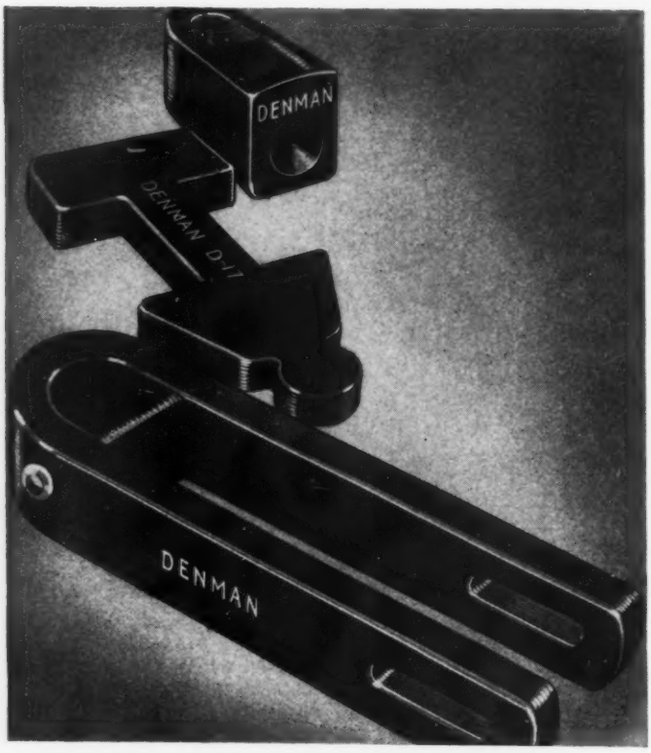
A copy of The Lixate Book will be sent free on request. It contains valuable information about the properties of brine, in addition to explaining the operation of The Lixate Process in detail. Write for a copy of this useful book.

The LIXATE *Process*
REG. U. S. PAT. OFF.
for making brine

INTERNATIONAL SALT COMPANY, Inc., SCRANTON, PA.

SALES OFFICES: *New York, N. Y. • Buffalo, N. Y. • Philadelphia, Pa. • Boston, Mass. • Baltimore, Md. • Pittsburgh, Pa. • Newark, N. J. • Richmond, Va. New Orleans, La. • Cincinnati, O. • St. Louis, Mo.*
REFINERIES: *Watkins Glen, N. Y. • Ludlowville, N. Y. • Avery Island, La.* • MINES: *Retsof, N. Y. • Detroit, Mich. • Avery Island, La.*

TESTED PROVEN
- - *and Accepted*



Denman Loom Parts are built to take the terrific punishment of today's high-speed looms.

Their outstanding performance and proven economy, over a period of years, has justified their widespread acceptance as standard equipment in leading mills.

They are your assurance of LOWEST COST per LOOM per YEAR.

DENMAN

PICKERS, LUG STRAPS, HOLD-UPS, ETC.

Exclusive Sales Agents

The Terrell Machine Co., *Inc.*

CHARLOTTE, N. C.

Luther Pilling, Danielson, Conn.—N. E. & Canada
E. W. S. Jasper, Elizabeth, N. J.—Penn. & N. J.
Geo. Thomas & Co., Ltd.—Manchester, England

Textile Preparedness

(Continued from page 63)

than 64s is used, with sufficient staple length to meet specifications. The weave specified for this fabric is a two up, one down right-hand twill. A third woolen fabric is an 11-oz. flannel, dark blue, used in undress jumpers, C.P.O. shirts, and as a garment lining. It is made from fleece or pulled wool not lower than 60s grade.

"One of the cotton fabrics used is a bleached drill. This fabric is 29 or 32 in. wide, of combed warp and filling, made from thoroughly cleaned cotton free from waste, shives, and other impurities. This material is used in white uniforms worn continuously in the torrid zone and during the summer in the temperate zone. Maintaining rigid requirements as regards minimum defects in the finished cloth, high breaking strength, and accurate shrinkage control, the fabric has been a constant challenge to the skill of the mill and bleachery. It is cool, and has body and draping qualities. It has stood up under the not too kind treatment of shipboard laundries and the every-day activity of ship's work.

"The Navy also uses a blue drill. Specifications require that this cloth be made of a grade of cotton not lower than good middling, well-carded, combed, and evenly spun into two-ply yarns, vat dyed blue, equal in shade to the standard sample. It has a three up, one down right-hand twill weave. This blue drill has been adopted for the collar and cuff of the dress white jumper.

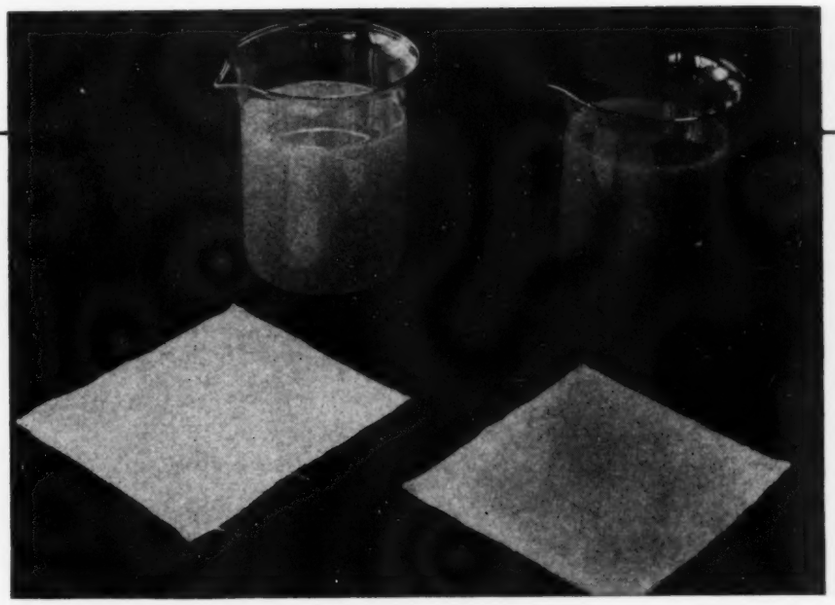
"Linings of trousers and overcoats, and the binding tape of all garments mentioned, are of cotton of suitable construction, designed to give maximum wear obtainable under hard service usage."

PROBLEMS ENCOUNTERED in procuring textiles during this country's involvement in the World War were reviewed in a paper prepared by Lieut. Col. George F. Spann, Procurement Planning Officer, Q.M.C.; and presented by Col. John A. Wharton, also of the Q.M.C. It was pointed out that many of the procurement problems of 1917–18 were being repeated today, especially as regards ducks, twills, denims, webbings, and cotton shorts. The paper also recalled the tremendous requirements of certain types of fabrics, and how this demand forced many mills to produce fabrics unfamiliar to them. The author stated that the greatest difficulty of all was the question of time, and indicated that steps were now being taken to anticipate requirements, and thereby reduce the time-lag between order placing and delivery of fabrics.

SUBSTITUTES for foreign textiles used in parachutes were discussed by Joshua Miller, Naval Aircraft Factory, Philadelphia. Mr. Miller described the various parts of a parachute, pointed out that materials of foreign origin have been used extensively in parachute fabrication, and stressed the necessity of developing domestic substitute materials for them. As substitutes for linen webbings, materials of Nylon, Fortisan, and cotton have been under investigation. For silk suspension lines, cotton, Nylon, and Fortisan substitutes are being tested. Possible satisfactory substitutes for parachute-canopy silk include Nylon and Fortisan. As regards various silk tapes used, Nylon and Fortisan have been found to be satisfactory substitutes. For linen and silk sewing threads, cotton, Nylon and Fortisan have been tested and found suitable for further investigation.

DU PONT Tetra Sodium Pyrophosphate

Prevents Iron Stains



Each solution shown in the photograph contained 100 parts per million of iron added as ferrous sulfate. To each were added sufficient soap and alkali to cause sudsing. The solution on the left contained in addition 0.05% Tetra Sodium Pyrophosphate. A piece of new white cloth was washed in each solution, rinsed and dried. As indicated by the photograph, the cloth washed in the solution containing T. S. P. P. remained white and clean. The other cloth was badly stained by the iron.

The solubilizing action of Tetra Sodium Pyrophosphate on iron salts is shown by the appearance of the solutions also. In the solution containing the Tetra Sodium Pyrophosphate, less cloudiness is evident as the iron has been kept permanently in solution and is not "available" to stain the fabric. The solution on the right without the Tetra Sodium Pyrophosphate is loaded with iron impurity and will stain fabrics which it contacts.

● Iron staining of fabrics due to the presence of iron in the wash water is a serious difficulty often experienced in home and commercial laundering. The stains are persistent and are not readily removed by rinsing or subsequent washing.

Effective prevention of iron staining may be obtained through the use of DU PONT Tetra Sodium Pyrophosphate in the washing compound. This chemical has an unusual capacity to "solubilize" iron, keeping it in solution throughout the washing process. As a result, there are no unsightly yellow stains on the washed fabrics.

Materials yellowed by iron stains from previous washing will be whitened and brightened when washed in detergent solutions containing DU PONT Tetra Sodium Pyrophosphate.

Use DU PONT Tetra Sodium Pyrophosphate for better soaps and cleaning compounds. Technical service is available to assist users of DU PONT "Pyro" in the composition of detergents.

DU PONT

E. I. DU PONT DE NEMOURS & COMPANY
INCORPORATED
GRASSELLI CHEMICALS DEPARTMENT
WILMINGTON, DELAWARE

Atlanta • Birmingham • Boston • Charlotte • Chicago • Cincinnati • Cleveland • Detroit • Los Angeles • Milwaukee
New Haven • New Orleans • New York • Philadelphia • Pittsburgh • Rensselaer • San Francisco • St. Louis • St. Paul
Represented in Canada by CANADIAN INDUSTRIES, LTD., General Chemicals Division, Montreal and Toronto

Exterior View of Filter House, Settling Basin and Storage Tank at Eagle Dyeing & Finishing Co., Mount Holly, N. J.

If you're not the "World's Largest" here's good news

In moderate size mills and finishing plants a pure water supply is no less important than in the world's largest. Typical of the modern, low cost water filtration plants we build for medium size mills is the one shown above. It takes water from a highly colored contaminated creek and, by the latest methods of chemical feeding, settling, filtration and automatic control, it delivers a guaranteed capacity of crystal clear, iron-free water at an absurdly low cost.

All Hungerford & Terry, Inc., filtration plants are—Durable in construction—Attractive in appearance—Require minimum attention—Have a guaranteed output—Guaranteed water analysis—Low first cost—Lowest operating cost. If you're interested in improving the quality of your finished products, the coupon below will make the next move ours.

HUNGERFORD & TERRY, Inc.

CLAYTON, NEW JERSEY

Boston—Syracuse—Paterson—Philadelphia—Washington—Charlotte—Louisville—Charleston—Detroit. Agents in other principal cities.

HUNGERFORD & TERRY, INC.
CLAYTON, NEW JERSEY

Gentlemen: Without obligation or expense on our part you may send your nearest representative to survey conditions here and give us the facts and figures on a Water Filtration or Water Softening Plant.

Name .....

Firm .....

Address .....

NEWS ABOUT MEN

George A. Sloan, former president of the Cotton-Textile Institute, has received two more honors. The National Committee for Music Appreciation voted to give him its annual award for distinguished cultural service to the community, in recognition of his accomplishment in behalf of the American Metropolitan Opera Association. A little later Mr. Sloan was elected president of that association.

B. B. Gossett, president of the Chadwick-Hoskins group of textile mills, has been appointed North Carolina chairman for Navy Day observance succeeding the late Stuart W. Cramer. Mr. Gossett is a graduate of Annapolis.

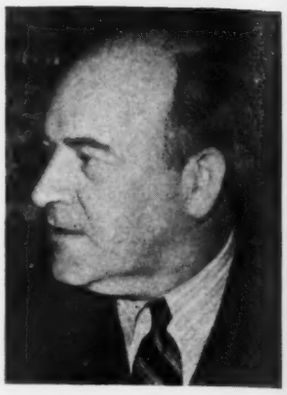
Olin Gay, of Gay Bros., Cavendish, Vt., has been elected president of the Woolen Manufacturers Association of New Hampshire and Vermont, succeeding **George Dorr** of Dorr Woolen Co., Newport, N. H.

Winslow A. Parker, of Southeastern Cottons, Inc., New York, has been elected president of the Downtown Textile Credit Group, Inc. He succeeds **A. J. Tischel** of Joshua L. Bailey & Co., who was elected a member of the board of governors. **Edward J. Nugent,** of Wamsutta Mills is treasurer.

Henry Neubert has been elected vice-president of Deering, Milliken & Co., New York, in charge of rayon fabrics.

Vernon L. Faulkner, of New Bedford, Mass., was elected treasurer and director of Continental Mills, Lewiston, Maine, last month to take the place of the late George H. Estes.

LUTHER H. HODGES, general manager of the manufacturing division of Marshall Field & Co., with headquarters at Spray, N. C., who is transferring his office to New York. He will devote his attention largely to sales. J. Frank Wilson has been appointed production manager at Spray.



W. RAY BELL, president of the Association of Cotton Textile Merchants of New York, who is now in charge of the Textile Division of the National Defense Advisory Commission. The five textile men who formed the original group—Robert Stevens, Arthur Besse, Charles Sweet, Earle Stall and Henry J. White—have returned to their own jobs but will be available for consultation when needed.

Roy A. Cheney, president of the Underwear Institute, is a member of an advisory committee set up by the American Trade Association Executives to serve as a contact group with the Bureau of Research and Statistics of the National Defense Commission.

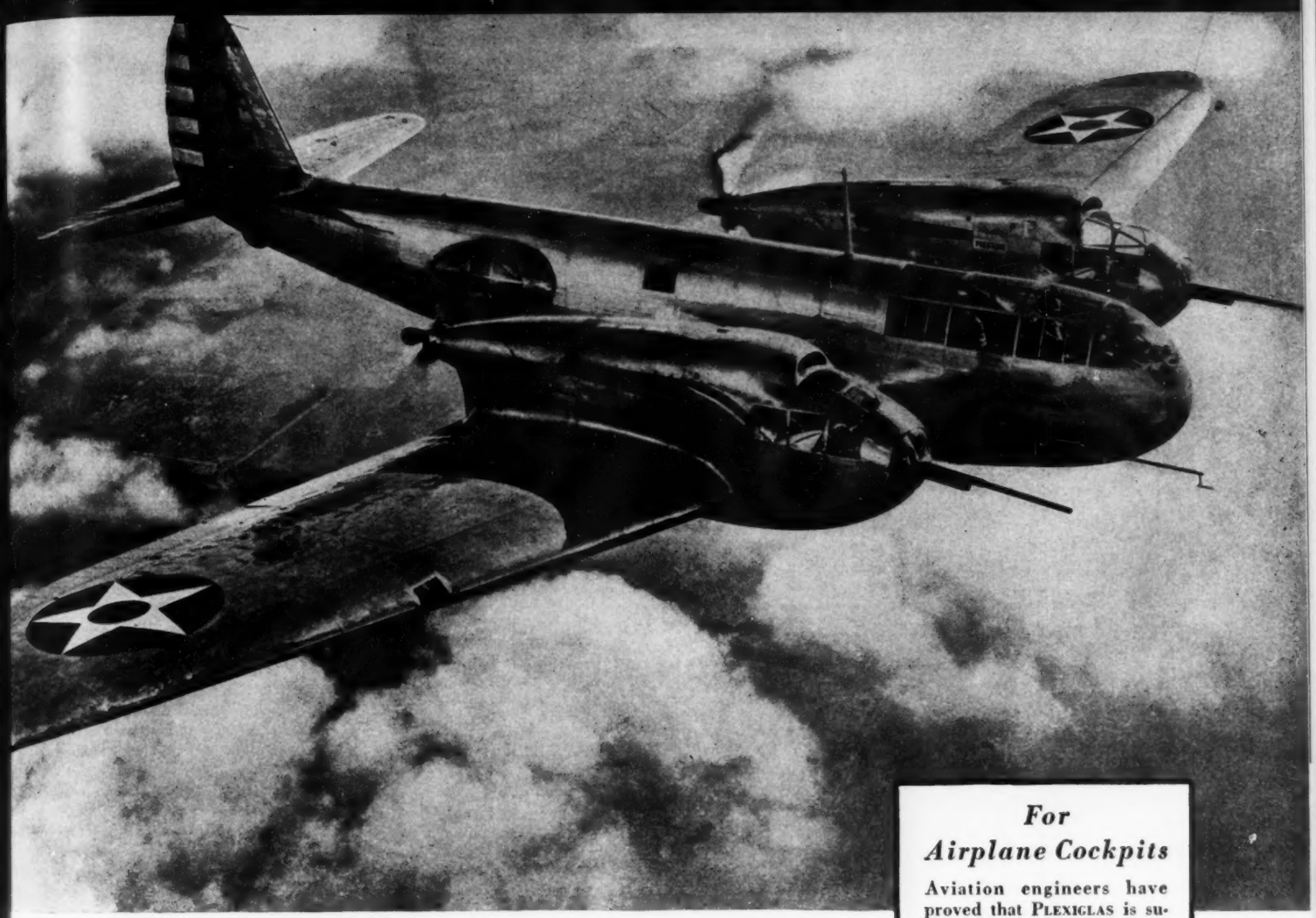
George W. Boys, resigned as superintendent of the China Grove (N. C.) Cotton Mills Co., has become vice-president and assistant treasurer of the Green River Cotton Mills, Tuxedo, N. C. He has been succeeded at China Grove by **Everett F. Cushman,** formerly of Cartex Mills, Salisbury, N. C.

H. G. Vick, has resigned as treasurer of Charles Chipman's Sons Co., New York, to organize his own hosiery sales company which will represent the Morganton (N. C.) Full-Fashioned Hosiery Co. and the Drexel (N. C.) Knitting Mills Co. after Oct. 15.

Claude Shelton, sales manager of Artcraft Silk Hosiery Mills, New York, has resigned that position.

Gosuke Imai, president of Katakura & Co., Ltd., of Japan, arrived in the United States early in September, and played an important part in the Silk Day reception at the Japanese Pavilion in the New York World's Fair on Sept. 18. Senator Imai has widespread silk

RHOPLEX RESIN



For Airplane Cockpits

Aviation engineers have proved that PLEXIGLAS is superior to all other materials for airplane windows, turrets, and nacelles. This plastic transmits more light than plate glass, and does not yellow with age. It is light in weight — an all-important consideration to the airplane designer. The plasticity of the product permits bending to almost any desired shape. In addition to these superior properties, PLEXIGLAS is practically unbreakable.

For Fabric Finishes

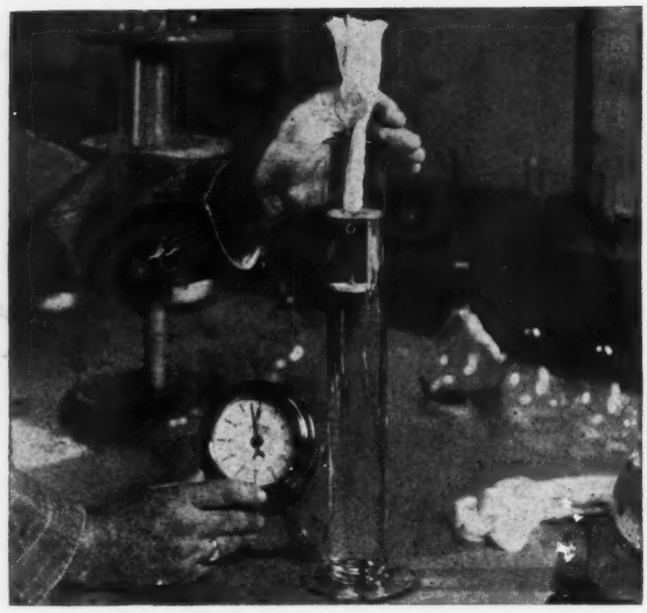
Almost inconceivable! Airplane windows and fabric finishes made from the same product. But it is true—PLEXIGLAS, the crystal-clear plastic, and RHOPLEX, the permanent resin finish, are the same resin.

The same superior properties essential for airplane use make RHOPLEX RESINS the ideal fabric finish. Crystal-clear RHOPLEX enhances the beauty of deep shades and delicate tints. The colors remain brilliant for the lifetime of the fabric because a RHOPLEX finish does not yellow with age. With RHOPLEX, the resin film bends as the cloth bends, and the finish is never brittle. RHOPLEX RESINS produce colorless, odorless finishes that are washfast.

RÖHM & HAAS CO., INC.

222 W. Washington Square, Phila., Pa.

FASTER . . .



. . . BY TEST, OR

IN PRODUCTION—

. . . and a better Money Value!

A wetting out agent is as effective as its concentration. It's not price per pound, but price per necessary dilution that counts. Before judging values, be sure you're testing on a money-value basis. The Houghton Man can demonstrate the ability of Surfax W.O. to stand dilution without losing its effective wetting speed. He can prove its efficiency at high or low temperatures . . . its superior wetting-back properties so necessary in sanforizing. Write for Surfax W.O. factual leaflet and the informative reprint on "Evaluation of Detergents and Wetting Agents".

SURFAX W.O.

TEXTILE PROCESSING PRODUCTS FOR
Wetting Out—
Detergency—
Warp Sizing—
Finishing—
Dye Assistants—
Stock Lubrication—
Silk Soaking

A Product of

E. F. HOUGHTON & CO.

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interests, and is known as the "Silk King" of Japan.

Frederick A. Colt was tendered a luncheon on Sept. 11 at the Arkwright Club, New York, by the General Arbitration Council of the Textile Industry, and the Textile Exporters Association. Mr. Colt had been secretary of these organizations for some years. Mr. Colt is 82 years old, and has been actively connected with the textile industry for 66 years.

J. Frederick Talcott was host to the executives and his other associates of James Talcott, Inc., on Sept. 6 at his summer home in Rumson, N. J. Mr. Talcott is president of that company.

W. L. Clayton, Anderson, Clayton & Co. Houston, Texas, has accepted the position of assistant to **Nelson Rockefeller,** coordinator of Cultural Relations between the United States and the Southern American republics.

Alston H. Garside, economist of the New York Cotton Exchange and New York Wool Top Exchange, sailed for Japan on the Argentina Maru from Los Angeles Sept. 29, for a three months' trip. He is to visit Japan to survey the textile industry of that country, with particular reference to the changes that have occurred in the last one or two years and the outlook for the future. Mr. Garside goes to Japan as the guest of the Japanese Chamber of Commerce of New York.

Vernon L. Faulkner, treasurer of Richard Borden Mfg. Co., Fall River, Mass., has been named agent and treasurer of the Continental Mill, Lewiston, Me. He succeeds **Henry B. Estes** as agent and the late George H. Estes as treasurer.

Charles D. Green has resigned as treasurer and general manager of Laurens (S. C.) Cotton Mills, and become manager of Mills Mill, Greenville, S. C., and the finishing unit of Fairforest Finishing Co., Clevedale, S. C. He will have his office at Spartanburg, S. C.

Samuel Ross, member of the board of trustees of the New Bedford (Mass.) Textile School since it was organized 42 years ago, has been appointed president of the board. **Walter L. Paige,** also a trustee, was elected vice-president.

J. H. Schoolfield has been elected a member of the board of directors of Mandeville Mills, Carrollton, Ga.

Clarence L. Jolly has resigned as superintendent of Inman (S. C.) Mills and on Oct. 1, assumed his new duties as general manager of manufacturing for plants of the

FRANK L. NAGLE, chairman of the board of Bragdon, Lord & Nagle Co. Division of the McGraw-Hill Publishing Co., publishers of TEXTILE WORLD, celebrated his 60th anniversary of continuous service with this publication and its predecessors on Sept. 20. He is still actively engaged on the sales staff of the paper.

Jackson Mills at Iva, S. C., Wellford, S. C. and High Shoals, N. C. He began his textile career in Winnsboro, S. C., and was later connected with the Manville-Jenckes Co., in Gastonia, N. C. He was with the Riverdale Mills at Enoree, and was appointed superintendent of Inman in 1937.

C. W. McNeely, East Point, Ga., has gone to Rio de Janeiro, Brazil, where he will be superintendent of a new mill near that city. **M. T. Grimes,** formerly of Gainesville, Ga., is manager of the mill.

R. G. Hoch, treasurer and manager of Biltmore Hosiery Co., Naples, N. C., has resigned.

W. A. Ball, formerly with Thomas Hosiery Mills, High Point, N. C., has become general manager of Bell Hosiery Corp., Suffolk, Va.

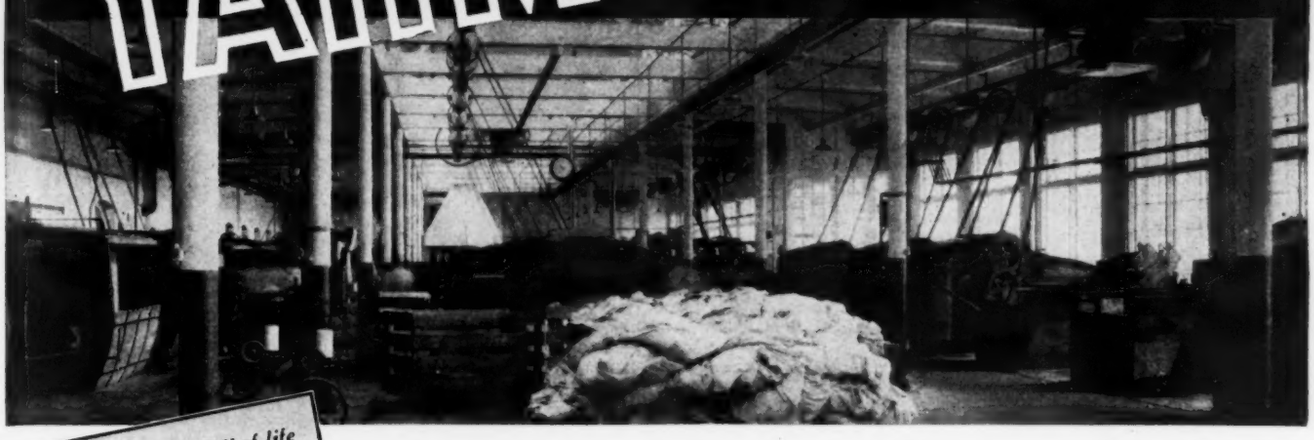
Arthur C. McEwen, agent of Wyandotte Worsted Co., Rochester, N. H., for the last three and one-half years, has accepted a position as agent of the Wyandotte Mill in Waterville, Me. He was superintendent in Waterville before going to Rochester.

E. G. Spier has accepted position of manager of Ashland Corp., Jewett City, Conn. He was formerly superintendent of a unit of the Burlington Mills Corp., with headquarters at Greensboro, N. C.

J. R. Copeland, general superintendent of the Swepsonville (N. C.) plant of Virginia Mills, Inc., has resigned after more than 50 years in the textile industry.

A. F. Bloch, of Edmund Wright-Ginsberg Corp., New

YARMOR 302



Woolens that are full of life and have a rich appearance are certain when Yarmor 302 is used in fulling and scouring. And Yarmor also protects against rancidity during storage.

ACTS FAST AND SAVES MONEY IN FULLING AND SCOURING

Textile men everywhere hail Yarmor* 302, the triple-action assistant. It is a penetrant, a dispersant, and a detergent-assistant—and it's economical.

Yarmor gives quick fulling action because of fast distribution or penetration of the soap. Because of Yarmor's lubricating action, less flock accumulates in front of the fulling mill. Oils and greases in the cloth are emulsified, so that they are readily washed out.

In the washer, Yarmor's dispersing action holds in suspension any insoluble precipitates that may form, and prevents them from redepositing on the cloth. Yarmor's detergent-assistance means that the fulling soap will rinse easily, quickly, thoroughly. Thus, rancidity during storage is reduced, finishing operations are materially aided, and results of uniform quality are assured. Yarmor's triple-action help is always ready, always economical.

Likewise, in all wet-processing operations, Yarmor puts water to work. Highly efficient yet gentle in action, a little does a lot and does it well. Yarmor is easy to emulsify; is efficient and economical. Try a little of this triple-action assistant, and find out why you should use it—always.

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WETS

DISPERSES

SUSPENDS FOR RINSING

HIT OR MISS METHODS

• • • of ordering your alkalies do not result in savings

More often than not, such methods add a *hidden cost* that is hard to trace in the manufacture of your textile products.

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NEWS ABOUT MEN

York, was elected president of the Silk Bowling League of New York for the 1940-1941 season, succeeding **Carl T. Erickson,** of Commercial Factors Corp. The new vice-president is **Sylvester Faherty** of John P. Maguire & Co. The league is now starting its 38th season and thirteen houses are represented in it.

William J. Custer, Jr., superintendent of Cheney Bros. silk printing department for the last fifteen years, has resigned to take charge of silk color work for Goodman & Theise, New York. Mr. Custer has been president of the Colorists Association of America for the last seven years.

Eugene D. Cogburn has joined the Atlanta, Ga., office of Riverside & Dan River Cotton Mills.

Dee Ellison, of Belton, has been appointed purchasing agent of the Grendel Mills, Greenwood, S. C. and other mills controlled by J. E. Abney, succeeding **J. W. Cathcart, Jr.,** who recently resigned to become superintendent of the Courtney Mfg. Co., Newry, N. C.

Lew Hamity, star football player at University of Chicago in 1936-1938, has become associated with his father **Samuel Hamity,** who is representative in the Chicago area of Industrial Rayon Corp. and Colonial Mills.

Frank P. Detzel, succeeds **Harry F. Washburn** in charge of the New York sales office of Gilbert Knitting Co., Little Falls, N. Y.

M. Martin Himler, for many years connected with the selling of silk fabrics, has joined the organization of S. Stroock & Co., New York.

David Seidman, for the last 27 years with the cloth brokerage organization of Heineman & Seidman, New York, and its predecessors, has withdrawn from that firm to join Colonial Mills, Inc., in an executive capacity.

Martin Koehring is now in charge of the advertising department of Phoenix Hosiery Co., Milwaukee, Wis., succeeding **Fred Zillman,** who has been made central district sales manager for Phoenix.

Wallace Leonard is now in charge of the New York office of Campbell Hosiery Mills, Lynchburg, Va. He had been with Nolde & Horst Sales Co., New York, since 1932.

Samuel M. Kootz has resigned as sales manager and stylist for the Worcester Knitting Co., New York.

Norman Bisanar, formerly manager of Viewmont Knitting Co., Hickory, N. C., has relinquished his duties in the textile industry and has become manager of the Coca Cola Bottling Co., Concord, N. C.

Edward L. Murphy, instructor in chemistry at New Bedford (Mass.) Textile School, has resigned to join the staff of a Boston firm.

W. Edmond Pendleton, Jr., has been named production manager for the Columbus mill of the Bibb Mfg. Co.

Irving J. Horwitz, assistant to **Charles A. Kaufman,** hosiery manager of Julius Kayser & Co., New York, has resigned.

W. ALLEN TRAVER, vice-president and general plant manager of Franklin Process Co., Providence, R. I. was guest of honor at a testimonial dinner held Sept. 21, in the Providence Biltmore Hotel. The testimonial dinner, which was attended by nearly 700 people, was arranged by the employees of the Providence plant in commemoration of Mr. Traver's 25 years of continuous service with the company. Mr. Traver's first position with Franklin Process Co. was that of mechanical superintendent. In 1918 he became assistant manager and a director of the company; in 1920 general plant manager; and in 1933 vice-president and general plant manager.

Speakers, all executives and employees of the company, were Messrs. Graves, Jones, Jastram, Dana, Greene, and Anderson, and Miss Levesque. On behalf of all the employees, Mr. Collins, paymaster and oldest employee in length of service, presented Mr. Traver with a suitably engraved silver service. Mr. Wood, mechanical superintendent, presided. To recognize the many other employees who have helped to make possible his successful management of the company, Mr. Traver awarded approximately 130 service buttons to those who have been with the company 10 years or longer.

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Yes, Sir, we did just that, because we know you want us to subject our new Vat Printing Powders to your conditions and the most vigorous practical tests possible before we offer them to you— ***therefore we do this work under actual plant conditions.***

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CHICAGO	357 W. Erie St.	GREENSBORO	Jefferson Standard Bldg.	PORTLAND, ORE.	730 West Burnside
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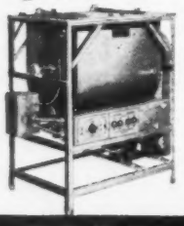

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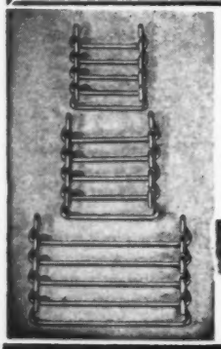

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NEWS ABOUT MEN

George A. Fenton, vice-president of R. K. Laros Silk Co., Bethlehem, Pa., has been elected president of Throwsters Research Institute, New York, succeeding **W. R. Rossmassler,** of Sauquoit Silk Mfg. Co.

Edmond Davignon, assistant superintendent of Dominion Textile Co., Ltd., Sherbrooke, Quebec, has been promoted to superintendent of the St. Ann's branch of the same company at Montreal.

D. C. Gunter, formerly in charge of spinning, winding and twisting, has been made superintendent of Modena Plant, the rayon division of Ranlo Mfg. Co., Gastonia, N. C.

John P. Faris has succeeded **H. W. Kiser** as superintendent of Watts (S. C.) Mills.

C. S. Howard has succeeded **E. E. Finley** as overseer of weaving at Pilot Mills, Raleigh, N. C. Mr. Finley resigned to become associated with Erlanger Mills, Lexington, N. C.

M. H. Carter has been made superintendent of carding at the Fries, Va., unit of Washington Mills Co., and **E. D. Nichols** has been made assistant superintendent of carding at the same plant.

Jefferson Robbins, superintendent of spinning at the Gayle unit of Springs Cotton Mills, Chester, S. C., has resigned to accept a similar position with Gaffney (S. C.) Mfg. Co. He is succeeded at Chester by **A. B. Nanney.**

F. N. Thompson has become assistant to the superintendent of spinning at the Gayle unit of Springs Cotton Mills, Chester, S. C.

R. L. Poovey, Jr., is now superintendent of the High Point, N. C., plant of Burlington Mills Corp.

J. F. Armstrong has become overseer of carding at Cleghorn unit of Spindale Mills, Rutherfordton, N. C.

Guy Atkinson, second hand in cloth room of Easley Cotton Mill, unit No. 1, Liberty, S. C., has been promoted to overseer of that department.

P. A. Kay, formerly overseer of weaving at Easley Cotton Mill, unit No. 2, Liberty, S. C., has become superintendent of Gossett Mills, Williamston, S. C.

J. K. Pittman has become assistant superintendent of Randolph Mills, Franklinville, N. C.

James Walton, Jr., formerly assistant superintendent of Hugh Grey Hosiery Co., Concord, N. C., has become superintendent of Gastonia (N. C.) Full-Fashioned Hosiery Mills.

J. H. Fagan has accepted position of superintendent of Cleghorn unit of Spindale Mills, Rutherfordton, N. C.

Mrs. Mamie Ingram of the spinning department of Swift Mfg Co., Columbus, Ga., received a large cake at a barbecue recently held by that department in recognition of her 53 years service with the company.

John C. Gilman, Jr., of New Bedford, Mass., has joined the staff of the Southbridge (Mass.) Finishing Co.

J. W. Proctor has become superintendent of No. 1 plant of Harriet Cotton Mills, Henderson, N. C.

J. G. Long has resigned as second shift foreman of Eva Jane carding, Avondale Mills, Sylacauga, Alabama.

C. J. Allison has been promoted from second hand to night overseer of weaving at Edna Mills Corp., Reidsville, N. C.

David M. Stiles, night superintendent for last two years at S. Stroock & Co., Newburgh, N. Y., is now assistant superintendent at Swift River Woolen Mill, Stafford, Conn.

L. E. Rickard has been promoted to superintendent of carding at Martinsville (Va.) Cotton Mills, and **Roger Young,** formerly with Barber-Colman Co., is now superintendent of the cloth room of those mills.

Joe Cooper, formerly with Inman (S. C.) Mills, has become second hand in weaving at the Gayle unit of Springs Cotton Mills, Chester, S. C.

Robert L. Rogers has been appointed overseer of slashing and drawing-in departments of Drayton (S. C.) Mills.

D. J. Whitaker has been promoted to assistant superintendent of Washington Mills Co., Fries, Va., from overseer of carding.

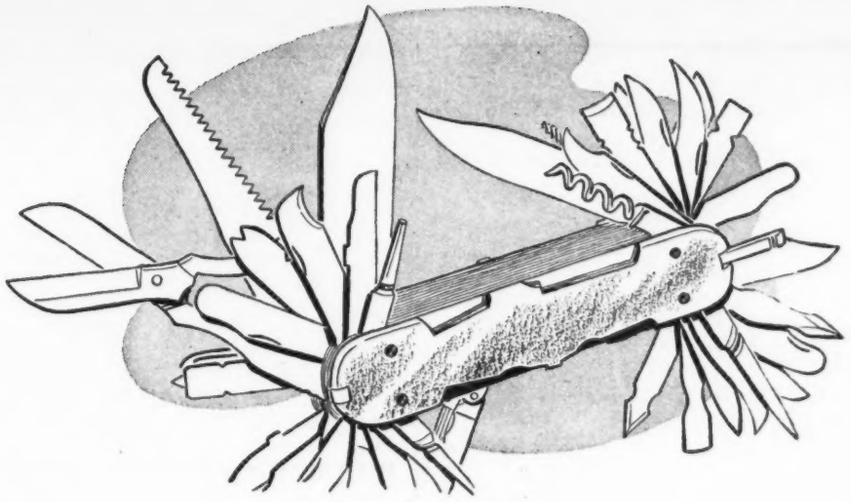
Willie T. Draper, formerly of Martinsville, Va., has become overseer of cloth room of Merrimack Mfg. Co., Huntsville, Ala.

S. H. Caldwell has resigned his position with the Goodyear Clearwater Mill of Georgia, to accept position of night superintendent at Henderson (N. C.) Cotton Mills.

R. D. Redding, who has been connected with Mooresville (N. C.) Cotton Mills, has become night superintendent of Harriet Cotton Mills, Henderson, N. C.

Jack Schandler, formerly with Geigy Corp., has become assistant dyer for Gastonia (N. C.) Combed Yarn Corp.

Guy W. Byrd, who has been



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If you have a problem in wetting, *consider* the DECERESOL Wetting Agents.
They are one of the most versatile wetting agents known—for two outstanding reasons:

1. ***Because they may be used with organic liquids as well as water.***
2. ***Because there is a wide variety of solutions for specific purposes.***

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Wetting out cotton piece goods prior to "grey souring".
Wetting out raw cotton in raw stock dyeing machines.
As a penetrant in all types of dyeing including yarn and knitted and woven goods.
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In desizing baths with enzymes to produce more rapid and efficient desizing.
For boiling off rayons and acetates.
In the woolen and worsted industry as an aid in fulling and carbonizing.

In your case, too, there may be a problem DECERESOL can solve.
And for other textile chemicals and specialties, consult Cyanamid for:

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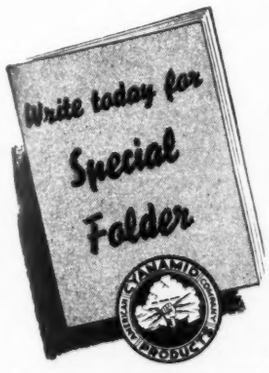

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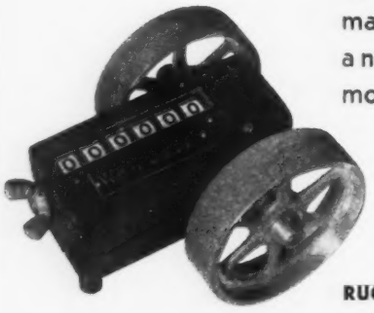

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WE KNOW that our new Cloth Guider and Opener does what we claim because we use it ourselves! Write for our interesting folder explaining how this dependable, waterproof device operates satisfactorily at all speeds with simple mechanical action, uncomplicated by either compressed-air or electrical equipment.

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connected with Covington (Va.) Weaving Co., as superintendent, has been transferred to the superintendency of the Central Falls (N. C.) Mfg. Co., a unit of Burlington Mills Corp.

D. K. Forsyth has become superintendent of Aliceville, Ala., unit of the Alabama Mills, and will serve in that capacity as well as remaining superintendent of the company unit at Winfield, Ala.

Craig Furr, High Point, N. C., has been appointed temporary superintendent of the Town House Hosiery Mill, Chilhowie, Va., which is owned and operated by the Burlington Mills Corp. He succeeds **Troy Myers,** who has been transferred to a unit of the company at Salem, Va.

S. L. Mavity, formerly superintendent of Silver Knit Hosiery Mills, High Point, N. C., has accepted the superintendency of the seamless knitting department of Elliott Knitting Mills, Hickory, N. C.

Obituary

George F. Earnshaw, 70, director and former president of Earnshaw Knitting Co. and Earnshaw Publications, Inc., both of Newton, Mass., died at his summer home at Ocean Point, Me., Oct. 1. He founded the knitting company which specializes in infants' and children's underwear in 1911. The monthly periodical *Earnshaw's* was started in 1919 as a house organ and has had unusually successful growth in serving the infants', children's and girl's wear field. Mr. Earnshaw had retired as president of his two companies several years ago.

Geo. F. Earnshaw

H. M. McCord, 57, active for over 20 years in the sale of textile mill properties, died at Westerly, R. I., Sept. 18. For ten years, from 1918 to 1928, he headed the Mill Property Department of the Bragdon, Lord & Nagle Co., which handled most of the large sales of mill properties in that period. His earlier career was with Sayles Bleacheries, Saylesville, R. I. In 1928, he entered business on his own account with offices in principal mill centers. In 1938 he merged his business with that carried on by Edwin Farnham Greene. Eighteen months later these businesses were separated and Mr. McCord carried on his operations as McCord Mill Properties, Inc.

Dr. D. M. Balsam, 64, founder of American Chatillon Corp., which later merged to form the Tubize Chatillon Corp., died late in September.

Major William A. Watts, 93, retired banker and industrialist and Laurens County's last Confederate veteran, died at his home in Greenville, S. C., Sept. 10. Major Watts assisted in the establishment of the Laurens Cotton Mills and the Watts Mills.

William F. Hofford, 76, founder and head of W. F. Hofford, Inc., operating silk and hosiery mills in Lehighton, Bowmanstown and Weissport, Pa., died Sept. 16 while at work in his Weissport mill.

William H. Morrill, 40, former president and agent of the Gonic Mfg Co. and Cocheco Woolen Mfg Co., Rochester, N. H., died recently.

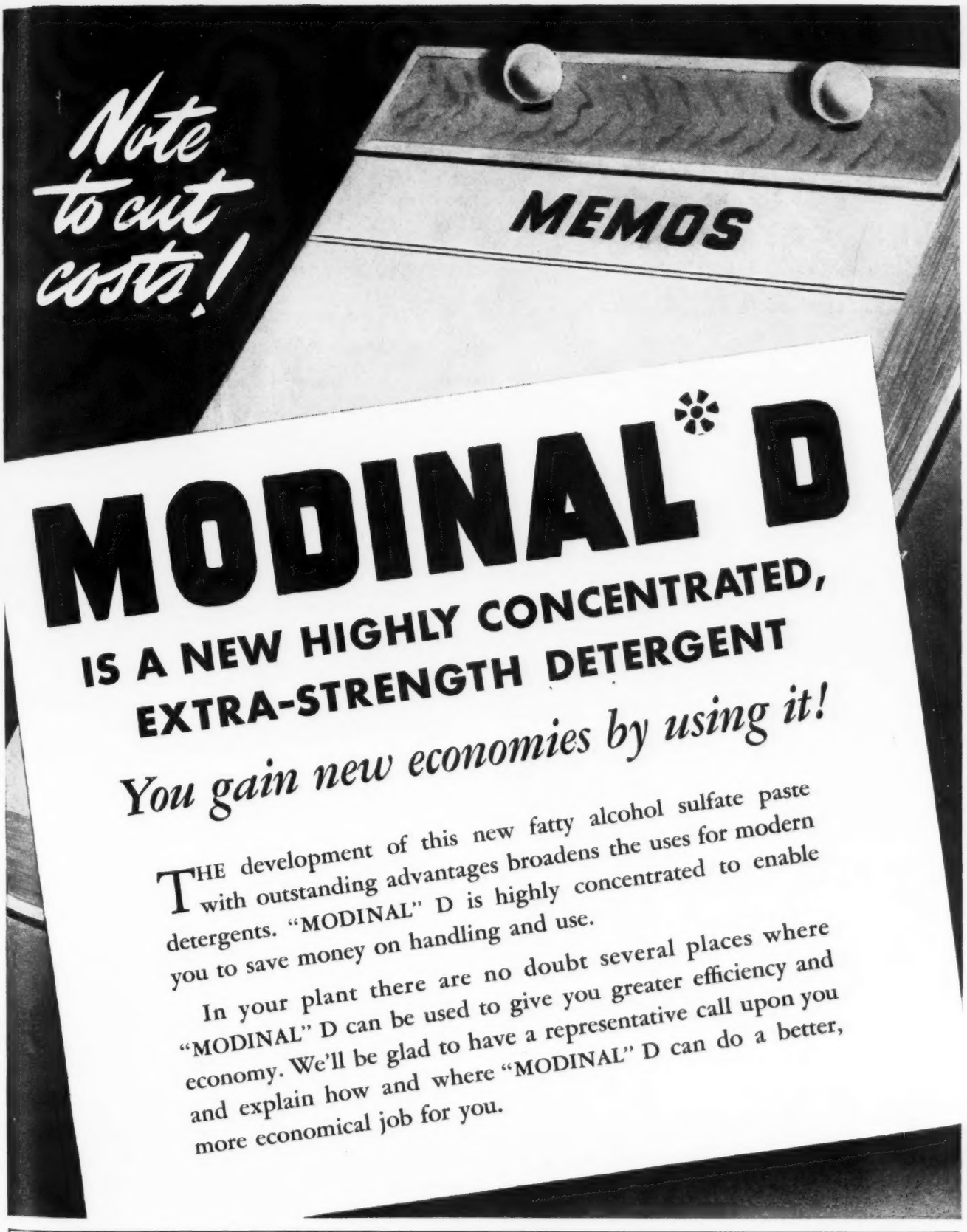
Robert P. Summers, who formerly was a partner in the Wheatley & Summers Textile Mill at Louisa, Ky., died at Huntington, W. Va., Sept. 7.

R. H. Dunlap, 48, vice-president of Industrial Hosiery Mills, of Mohnton, Shillington and Lebanon, Pa., died Sept. 7.

Benjamin G. Slaughter, 59, formerly president of the Tubize Chatillon Corp., died at his home in Richmond, Va., Sept. 18. Mr. Slaughter, a chemical engineer, joined the Tubize Artificial Silk Co. of America in 1923. He retired from the firm in 1932.

Charlie H. Lester, 91, native of New London, Conn., who constructed the Long Island Cotton Mills, the East Monbo Mill and the old Monbo Mill, died at his home at Long Island, N. C., Sept. 15.

R. Jay Flick, 69, vice-president of the Wilkes-Barre (Pa.) Lace Mfg. Co., died Aug. 24.



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In your plant there are no doubt several places where "MODINAL" D can be used to give you greater efficiency and economy. We'll be glad to have a representative call upon you and explain how and where "MODINAL" D can do a better, more economical job for you.

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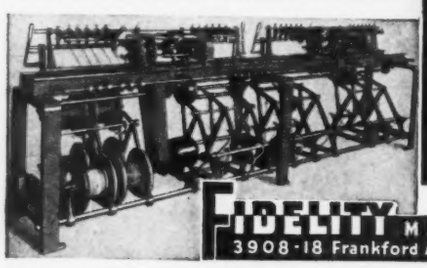

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3-Color Yarn Selector & Knot Tyer
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Special Machines designed and built

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ALLEN HOLLOW Hex Socket SCREWS FOR TEXTILE MACHINERY

Heads set flush with machine surfaces; no sharp edges to catch fabrics; no slots to burr and pull threads. Strongest, handiest screws to use; hold tight under vibration. Ask for *free samples* — indicate types and sizes wanted.

ALLEN MFG. CO., Hartford, Ct.

NEWS ABOUT MEN

Arthur A. A. Stewart, 64, head of the textile finishing department at Lowell (Mass.) Textile Institute, died at his home in Lowell on Oct. 3. Prof. Stewart was born in Montreal, and was graduated from Lowell in 1900. He became professor of textiles in the fall of that year. From 1901 to 1940 he was secretary-treasurer of the Lowell Textile Alumini Association.

John Paul Lucas, Sr., director of merchandising for the Duke Power Co., died at his home in Charlotte, N. C., Sept. 28 after an extended illness.

J. C. Norman, 41, of Sylacauga, Ala., a contributor to TEXTILE WORLD, died after being struck by an automobile on Sept. 14. Some years ago Mr. Norman was second hand in card room at Talladega (Ala.) Cotton Mill, and at Sally B Mill of Avondale Mills Co., Sylacauga. He later was loom-fixer in the latter mill, and took textile courses at the University of Alabama. In 1932 he suffered an illness which handicapped him and at the time of his death he was a quill boy. His articles on the human side of the industry have been written out of first hand experience. Such an article appears on page 105 of this issue.

Charles J. Esterly, 52, for many years a sales executive of Berkshire Knitting Mills, Reading, Pa. and other hosiery manufacturing companies, died Sept. 4. He was Congressman from the 14th Pennsylvania District in 1925-26.

Matthew Lamport, 37, head of the Chicago office of Al Lamport & Bros., died as the result of a railroad accident early in September.

George Newman Roberts, 65, chairman of the board of Bemis Bros. Bag Co., Boston, Mass., died Sept. 15. He joined the Bemis company at St. Louis in 1899.

Jean Frederick Schieb, 87, who was president of Julius Forstmann Corp., Passaic, N. J. from 1928 to 1930, died last month. He joined that company in 1906 and has been retired for the last ten years.

Frank E. Terry, 79, retired president of the Cortland-Gouverner Silk Mills, Inc., died at his home in Bay Shore, L. I., last month. He retired from the silk business in 1929.

William B. Hafford, 76, operator of silk mills in Bowmanstown and Weissport, Pa., and owner of the Carbon Silk Mills, Lehighton, Pa., died Sept. 17.

Horace T. Jones, president of the H. Conrad Jones Woolen Mills, died at his home in Buck Hill Falls, Pa., recently.

Paul Selver, 55, founder and president of Dutchess Underwear Corp., Old Forge, Pa., and a pioneer in the rayon manufacturing industry, died Sept. 14.

Frank James Harwood, 84, president of the Appleton (Wis.) Woolen Mills, died recently. Mr. Harwood became associated with Hutchinson & Co., predecessor to Appleton, in 1876.

William T. Barrace, 73, president of Charles Cooper Co., Inc., Bennington, Vt. died early last month.

Moses F. Aufsesser, 61, president of the Star Woolen Co., Cohoes, N. Y.., died early last month.

Edward C. Worden, 65, authority on cellulose chemistry, died at his home in Millburn, N. J., Sept. 22. He was head of the Worden Laboratory and Library at Millburn.

Edward S. Crotty, 58, for the last eight years superintendent of Superior, Inc., Piqua, Ohio, died Sept. 17 while at work in the mill.

Charles C. Johnson, for the last 25 years employed by American Viscose Corp. at Marcus Hook, Pa., and for some years around 1912 known to Wilmington, Del., baseball fans as "Home Run" Johnson when he played in the Tri-State League, died last month.

Stephen H. Crowley, 58, assistant general manager of the Lewiston (Me.) Bleachery & Dye Works, a division of Pepperell Mfg. Co., died Sept. 14. He had been at that mill for 32 years.

Sigmund Ruscha, 64, for many years a salesman for the Columbia Knitting Co. and the Milwaukee (Wis.) Knitting Co., died recently.

William A. Ryan, secretary of Arnold Knitwear Corp., Cohoes, N. Y. for the last 30 years, died recently.

Frederick E. Duneen, 64, formerly superintendent of the Seaconnet Mills, Fall River, now the Howard-Arthur Mills, died in Danielson, Conn., last month.

Isaac J. Osbun, 52, regional manager of the Fabric & Finishes Department of E. I. du Pont de Nemours & Co., died at his home in Atlanta, Ga. early in September.

Ralph P. Gather, 38, in charge of the American Silk Mills plant at Long Branch, N. J., died Sept. 14.

Timothy Mooney, treasurer of the Superba Towel Co., Fall River, Mass., and of the Hawkinsville (Ga.) Cotton Mills, died in Fall River early last month.

A LESSON IN SOAP COSTS

BEFORE C.P.P. $2.10 per hour
AFTER C.P.P. $1.46 per hour
SAVING $ .64

ANNUAL SAVING $4,000

HOW THE COLGATE-PALMOLIVE-PEET TECHNICAL MAN HELPED US

1. We process well over a million yards of cotton prints a week in our plant, and a saving of a few cents an hour would be worth while. The C.P.P. man called and suggested a change in our formula that looked good to us.

2. The cost of soap for the trial run he suggested came to $80.00. If that investment cut costs without lowering the quality of our work, it would be a real bargain. We gave the C.P.P. man our O.K. to go ahead.

3. He worked with us in our plant during the trial run. As a result of his new formula, we are now able to process prints at a saving of 64¢ *per hour*. You can bet we are sold on the C.P.P. soaps for all our work!

THE C. P. P. MAN'S MONEY-SAVING SUGGESTIONS WERE FREE! PERHAPS HE CAN HELP YOU, TOO. WRITE TODAY!

THE above is an actual case history of how the FREE Colgate-Palmolive-Peet Consulting Service saved money for a textile manufacturer.

Find out how the C.P.P. Free Service can help you, too!

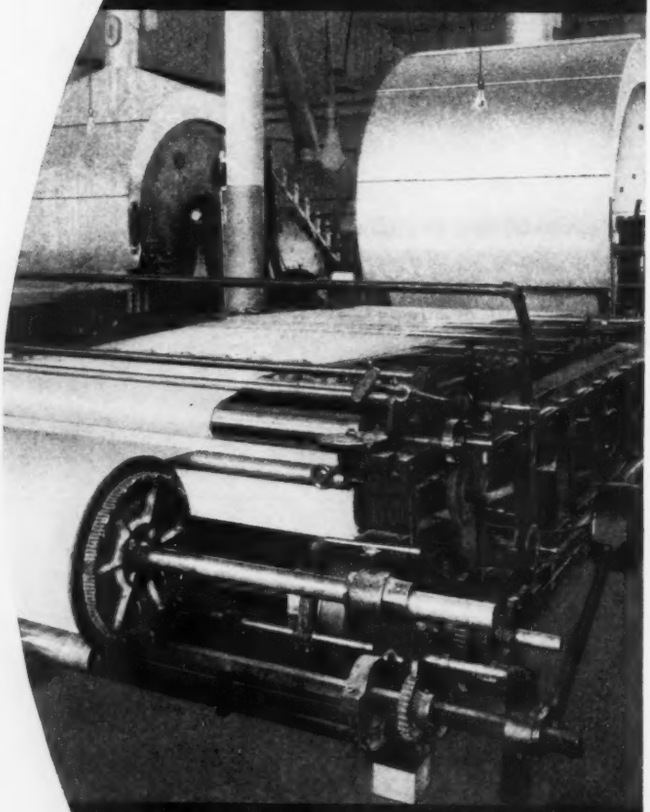
Colgate-Palmolive-Peet makes detergents and wetting-out agents to fit any processing requirement. These C.P.P. products usually cost less than so-called "special" products. Ask the C.P.P. man for free information or write direct to us. No obligation, of course.

COLGATE-PALMOLIVE-PEET CO.

INDUSTRIAL DEPT., JERSEY CITY, N.J.

★CLEANLINESS
★UNIFORMITY
★SERVICE

Warp Sizing Starches



Serving the Textile Trade for over a quarter of a century . . .

CORN PRODUCTS SALES CO.

Greenville, S. C.
Greensboro, N. C.
Spartanburg, S. C.
Atlanta, Ga.
Birmingham, Ala.
Boston, Mass.

TEXTILE MILL NEWS

Cotton Mill News

Aldora Mills, Barnesville, Ga., owned by General Tire & Rubber Co., Akron, Ohio, for nine years, however, having been operated under the management of the Thomaston (Ga.) Cotton Mills, former owners, are now being operated by the owners. W. E. Vecsey is plant manager.

Anniston (Ala.) **Mfg. Co.** is installing a new 200 hp. boiler and a Detroit stoker which will cost about $20,000.

Avondale Mills reports net profit for year ended July 27, 1940 of $503,092, compared with a loss of $36,597 for previous fiscal year.

Bibb Mfg. Co., Macon, Ga., has rejected bids recently received for addition to local Payne Mill, and will have revised plans prepared. New structure will be two-story, instead of one-story as previously announced, about 37 x 207 ft., reported to cost over $85,000, with equipment. Lockwood Greene Engineers, Spartanburg, S. C., are engineers. The Bibb unit at Columbus, Ga., has begun work on construction of a gymnasium.

Callaway Mills, Manchester, Ga., have changed all roving frames over to long-draft, the opener room has been rearranged, and the machine shop has been moved to an adjoining warehouse to make room for additional twisting machinery.

Cannon Mills Co., Kannapolis, N. C., has awarded contract for construction of a three-story office building. Norman Pease, Charlotte, N. C., architect, prepared the plans.

Chicopee Mfg. Corp., Chicopee Falls, Mass., plan a 1-story brick office building on Main Street. Adams & Ruxton Construction Co., Springfield, has contract on bid of $20,000. Henry J. Tessier, Springfield, is architect. Chicopee plans a 91 x 30 ft. office addition to the Coolidge mill at Manchester, N. H., which it is operating.

Eno Cotton Mills, Inc., Hillsboro, N. C., have let general contract to John H. Bonitz, Greensboro, N. C., for remodeling and improving weave shed at mill. J. E. Sirrine & Co., Greenville, S. C., are architects and engineers.

Erlanger (N. C.) **Cotton Mills** have recently completed installation of a cotton blending system's oil spraying device, manufactured by Borne Scrymser Co., and the Tintinol Process for tinting rayon.

Exposition Cotton Mill No. 2, Lafayette, Ga., will start operations soon. It is the former Linwood Mill shutdown for six years. A. E. Massey, of Anniston, Ala., has been named superintendent. Mill will start with two shifts, employing about 200. It was owned by the Consolidated Textile Co., when it closed during the general strike in 1934.

Flint Mfg. Co., Gastonia, N. C., is installing 16 additional spinning frames and five cards.

Freeland (Pa.) **Textile Mill, Inc.,** has been chartered to establish a plant for manufacture of cotton yarn, threads and cloths, silk and kindred articles. Hyman M. Chapnick, 1440 Broadway, New York, represents the firm.

Fulton Bag & Cotton Mills, Atlanta, Ga., have work nearing completion on superstructure for new eight-story warehouse on Rennel St. Cost is reported over $75,000. Erection contract was let recently to A. K. Adams Co., Atlanta.

Georgia-Kincaid Mills, Griffin, Ga., have awarded contract to Newton Coal & Lumber Co., Griffin, for one-story building, 54 x 164 ft., to be equipped as a school.

Hartwell Mills, No. 2, Toccoa, Ga., have begun construction of a new opener room and warehouse. C. M. Guest & Sons, Anderson, S. C., have the contract. It will cost $15,000.

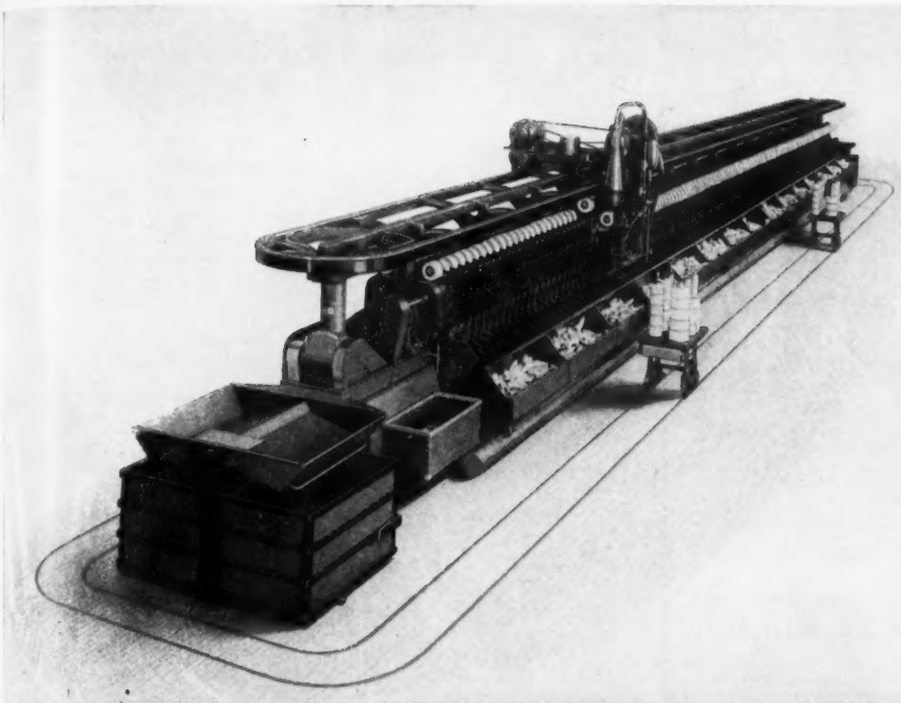
January & Wood Co., Maysville, Ky., has awarded the contract for the dry pipe system of automatic sprinklers to Grinnell Co. The new building is 102 x 102 ft.

Kendall Mills, Inc., Paw Creek, N. C., has let general contract to Morris-Poe Construction Co., Greenville, S. C., for one-story addition to branch mill at Pelzer, S. C. Cost reported about $45,000, with equipment.

Lavonia (Ga.) **Mfg. Co.** is installing new machinery in a complete modernization program. This company manufactures colored and novelty yarns. J. M. Battson is president and treasurer.

Marshall Braid Co., Pawtucket, R. I., is moving to newly purchased mill building at Coventry Centre, R. I.

Maurice Mills, Thomasville, N. C., have begun construction of two additions. Contract is in charge of Miller Construc-

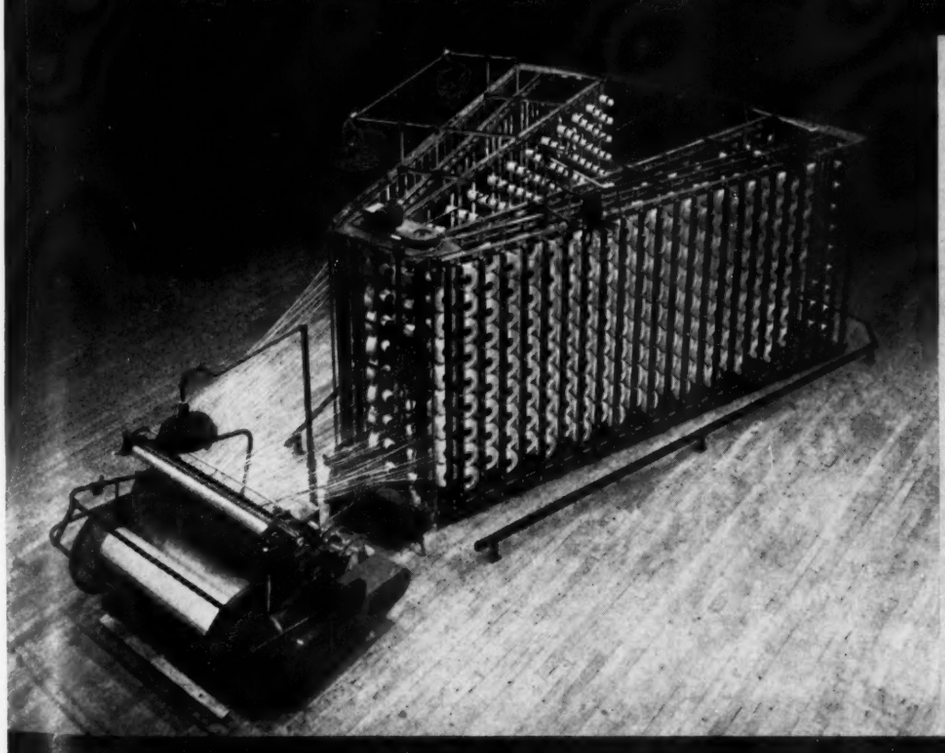


Automatic Spooler

Super-Speed Warper

RELEASE 50% FLOOR SPACE

with Barber-Colman Spooling and Warping Equipment



For a given production, these machines require only half the floor space of old-style units. With current demands for additional capacity, this is an important consideration as it will permit better use of existing buildings.

BARBER-COLMAN COMPANY

ROCKFORD, ILLINOIS, U. S. A.

FRAMINGHAM, MASS., U. S. A. • GREENVILLE, S. C., U. S. A. • MANCHESTER, ENGLAND • MUNICH, GERMANY

Why Not? *Have Your Personal Accident and Health Insurance with . . .*

EASTERN COMMERCIAL TRAVELERS

Mutual Company • No Agents • No Branch Offices

MASSACHUSETTS CO., INC. 1894

ACCIDENT POLICY PAYS		HEALTH POLICY PAYS	
ACCIDENTAL DEATH	WEEKLY DISABILITY	$25.00 Per Week for Confining Sickness	$10.00 Per Week for Non-confining Sickness
$5,000-$10,000	$25.00-$50.00		
Estimated Annual Cost $15.00		Estimated Annual Cost $20.00	

PAYS WHILE YOU ARE LAID UP
PAYS FROM THE FIRST DAY OF DISABILITY
46 YEARS OF UNFAILING SERVICE

No Policy Is Cancelled, Rates Increased, or Benefits Reduced on Account of Any Age!

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T. W. '40

STANDARD

G. W. LEWIN Straight WEAVERS' COMBS

Patent No. 172864

Highly polished brass backs. Hardened steel pins with hardened steel pick-out point of special steel which will not bend.

Style B80—Curved 80 fine pins
Style B60—Curved 60 coarse pins
Style B40—Curved 40 coarse pins
Style C80—Straight 80 fine pins
Style C60—Straight 60 coarse pins

Price $2.00 Dozen—$20.00 Gross.

Manufactured by

STANDARD MILL SUPPLY COMPANY

1076 MAIN ST. PAWTUCKET, R. I.

Southern Standard Mill Supply Co., Charlotte, N. C.

NOVELTY-YARNS

For

WEAVERS-KNITTERS

MONTGOMERY

WINDSOR LOCKS, CONN.

Designers and Spinners of Novelty Yarns

tion Co., of Thomasville. One addition will be 30 x 60 ft. and the other 30 x 70 ft.

Paton Mfg. Co., Sherbrooke, Que., has preliminary plans for one-story mill addition, reported to cost over $60,000, with equipment.

Pee Dee Mfg. Co., Rockingham, N. C., has installed new equipment which included 50 C. & K. dobby looms, which replaced old machinery in the weave room. A Cocker, high-speed warper was installed in the warping department, also new dyeing, drying and other warping equipment.

Pepperell Mfg. Co., Opelika, Ala., is constructing an addition to its weaving department.

Powdrell & Alexander, Inc., Danielson, Conn., reports net earnings of $34,997 for first half of 1940 compared with $84,336 for the first half of 1939.

Ridge Mills, Gastonia, N. C., a unit of Textiles, Inc., plans addition to plant and installation of several additional machines including 12 cards, four combers, one slubber, two intermediates, and nine roving frames.

Rodman - Heath Cotton Mills, Waxhaw, N. C., has been leased to W. R. Armstrong, Gastonia, N. C., for five years.

Southern Mills, Inc., Atlanta, Ga., is constructing a branch at Senoia, Ga., with C. H. Cleveland in charge. The building will be 100x150 ft. Automobile seat-cover fabrics will be manufactured.

Springs Cotton Mills, Lancaster, S. C., are constructing a building which will house the general offices, also afford additional warehouse space.

Startex Mills, Tucapau, S. C., are installing a new type winding and warping machine in the crash unit, replacing equipment which had been in use for many years. An addition to one of the slashers has been completed.

Statesville (N. C.) **Cotton Mills** have installed new equipment including combination beams and package dyeing machinery made by Gaston County Dyeing Machine Co., Stanley, N. C.

United Merchants & Mfrs., Inc., report net profit for year ended June 30, 1940 of $2,021,620, compared with net profit for 11 months ended June 30, 1939 of $1,466,196.

Walton Cotton Mill Co., Monroe, Ga., has let general contract to G. M. Caskey & Sons, Athens, Ga., for one-story addition for warehouse unit. Cost close to $25,000.

Watts (S. C.) **Mills** are constructing a 100,000 gal. elevated water tank. R. D. Cole Co., of Newnan, Ga., has the contract.

Werthan Bag Corp., Nashville, Tenn., has approved plans for new boiler plant at mill, and will begin erection soon. Cost reported over $35,000 with equipment. M. R. Reese is consulting engineer.

Wool Mill News

Biltmore Spinning Co., Asheville, N. C., is installing machinery and equipment in three one-story mill units for production of heavy woolen yarns for rug manufacture.

Blackinton Mill, North Adams, Mass., was bid in by RFC for $12,000 at public auction. Residents of North Adams have raised $30,000 as a backing guarantee to a prospective lessee.

Botany Worsted Mills, Passaic, N. J., reports net profit of $9,388 for first half of 1940 compared with net profit of $300,349 for same period of 1939.

Chatham Mfg. Co., Elkin, N. C., was damaged by a fire that originated in a drying room and burned the main section of the scouring plant, on Sept. 6. Loss is estimated at $250,000. The plant is the same one which was submerged during the Aug. 14 flood. It will be rebuilt and in meantime facilities will be arranged in its new plant.

Cocheco Woolen Mfg. Co., East Rochester, N. H., by stockholders' agreement, cancelled the auction sale set for Sept. 3, and plan resumption of work at the mill.

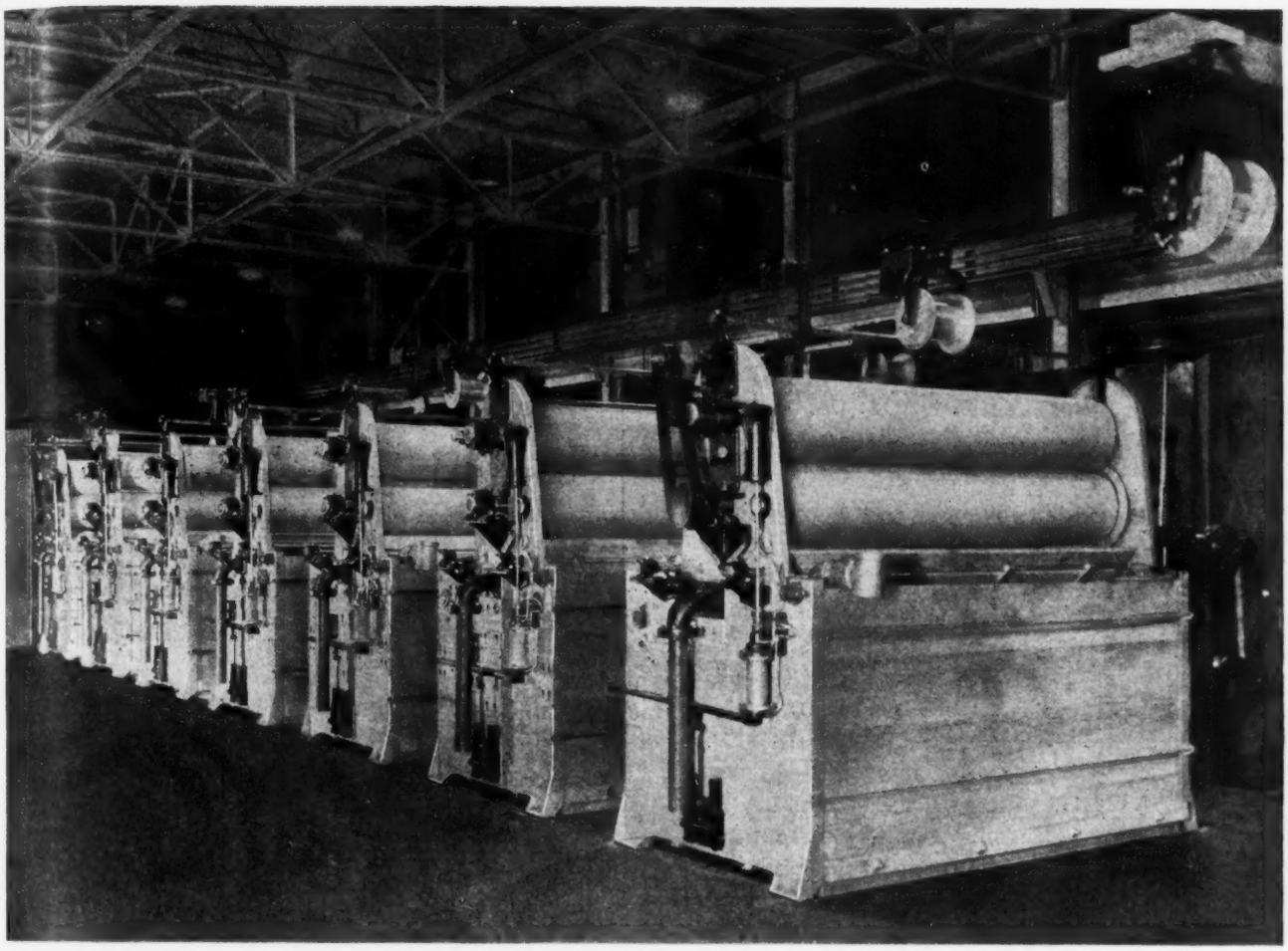
A. D. Ellis Mills, Munson, Mass., have modernized their dyehouse with installation of Rodney Hunt "Tru-Shade" stainless steel dyeing machines replacing older-type wood dye kettles.

Julius Forstmann & Co., Passaic, N. J., plan one-story addition, about 50x100 ft., for warehouse. Cost reported over $25,000.

Jamestown (N. Y.) **Worsted Mills** are seeking a $150,000 RFC loan in addition to $100,000 which may be raised locally in order to place the mill's finances in shape to reopen the plant. It closed down on Aug. 24.

Lima (Ohio) **Woolen Mills Co.** is in hands of J. A. and J. N. Claypoole as co-receivers.

Roxbury Mills, Inc., Reading, Pa., recently organized, have taken over a one-story mill and operations have begun for carding, spinning and



Now HUNTER OFFERS A CONTINUOUS WASHER THAT IS *really flexible*

Pictured above is the latest Hunter contribution to low cost continuous cloth scouring. This new Hunter unit differs from all other known continuous washers in a very important respect. It is this: It may be used either as a continuous range or as seven individual cloth washers which may be used all at one time with seven different loads or as few or as many bowls as may be required.

This new unit is relatively low cost in initial expense and is inexpensive to operate. For complete details, write to

JAMES HUNTER MACHINE COMPANY

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PARAMOUNT Dual Heat Hosiery Finishing Machine

CREATING Incomparable Quality in Hosiery Finishing and Establishing Production Figures that are truly amazing, the Paramount Dual Heat Machine will revolutionize and simplify your hosiery drying and finishing methods.

Compare this Machine with your present equipment. You will find that it requires less square feet of floor space per dozen than any existing method of finishing; less steam consumption — heating is direct; less power — a one-quarter horsepower motor operates the entire machine; less investment per dozen — reasonably priced; less upkeep — built to render years of service; and production possibilities with quality work that cannot be challenged.

Machines will pay for themselves in direct savings to you.

WRITE FOR DESCRIPTIVE BOOKLET

Paramount Service With All Paramount Products

Paramount Textile Machinery Company

Main Sales Office

538 S. Wells St., Chicago, Ill.

dyeing of woolens. Company proposes early establishment of a weaving division.

Waterford (Conn.) **Woolen Co., Inc.,** recently chartered with capital of $50,000, plans operation of a local mill. Incorporators include Mortimer L. Doolittle, Stamford, Conn.; and William A. Kelley, Darien, Conn.

West Coast Woolen Mills, Ltd., Vancouver, B. C., has purchased land near its present plant and will erect a $75,000 office and warehouse. The firm has just completed a large addition to its present plant, a direct result of war orders.

Rayon & Silk Mill News

American Viscose Corp., Wilmington, Del., has taken bids on general contract for two additions to mill at Nitro, W. Va., including a general production unit and extension to boiler plant, respectively. Cost reported over $100,000, with equipment. Ballinger Co., Philadelphia, Pa., is architect and engineer. The Viscose Corporation has awarded general contract to George A. Rutherford Co., Cleveland, Ohio, for construction of a research laboratory at its mill near Meadville, Pa.

Atlantic Rayon Corp., Providence, R. I., reports net loss of $47,373 for second quarter of 1940, compared with net profit of $13,316 for similar quarter of 1939.

Belding Heminway Co. has sold its No. 6 mill in Florence, Mass., to Prophylactic Brush Co.

E. I. du Pont de Nemours & Co. are reported to have taken options on two parcels of land, totaling about 487 acres, on the South River, 2½ miles southwest of Martinsville, Va. The site is under consideration for a plant for the manufacture of synthetic yarn. DuPont Nylon unit at Seaford, Del., is scheduled to have its building program for second unit completed by early December. Installation of machinery is scheduled to be completed next July. At Old Hickory, Tenn., company is building parking sheds for employees' automobiles.

Henry Doherty Silk Co., Clifton, N. J., was sold Sept. 20 to satisfy a $685,000 mortgage held by RFC. The RFC was sole bidder at $1,000.

Dominion Spinners, Ltd., St. Johns, Que., recently organized by officials of Bruck Silk Mills, Ltd., Montreal, Que., have acquired building of Shick Shaver Co., and will improve and equip for rayon throwing mill. About 18,000 spindles and auxiliary equipment will be installed.

Eagle Mfg. Co., Shamokin, Pa.—Machinery has been sold by RFC to Robert Cohen, Fall River, Mass. Finishing division has been leased as a going unit.

Gilt Edge Silk Mills, Inc., New Bedford, Mass., are closing negotiations for purchase of about 200 looms now at local mill of National Silk Spinning Co., in liquidation. Purchasing company is said to be planning transfer of the equipment to its local plant.

Lorraine Yarn Mills, Inc., Howe St., Fall River, Mass., have been organized to operate a local mill. Sidney Brown, Chelsea, Mass., is president; and Lorraine Vezina, Fall River, treasurer.

Knitting Mill News

Conrad Hosiery Co., Waycross, Ga., newly organized, opened in the mill building on Satilla Lane. Oscar H. Conrad is owner and operator.

Gardiner - Warring Co., Inc., Florence, Ala., has acquired the Erwin Mfg. Co., Huntsville, Ala., and will operate as an affiliated mill.

Globe Underwear Co., Shoemakersville, Pa., awarded general contract to R. B. Stitzel, Shoemakersville, for two-story brick and steel addition to its plant, to cost about $40,000.

Harrison Mills, Inc., East Newark, N. J., recently organized, will operate mill at 251 Grant Ave. for production of knit goods. New company has taken over machinery and equipment of Max Weinberg Knitting Co., New York, and will use at new mill, providing additional equipment for increased capacity. Max Weinberg, head of last noted company, will be president of new organization, in charge of production.

Hinshaw Hosiery Mills, Balfour, N. C., J. R. Hinshaw, owner and operator, has begun work on construction of an addition to increase plant to three times its original size.

Homestead Industries Co., Government project located at the Bankhead Farmsteads, Jasper, Ala., is rapidly increasing production and now has in operation 48 hosiery machines.

Infants Socks, Inc., Eufaula, Ala., is installing additional machinery.

Kingston Hosiery Mill, Inc., Charlotte, N. C., has

The Vitritex Finish on Pawtucket Rings is an exclusive Saco-Lowell development. Its hardness and glass-like smoothness is almost impervious to wear. Pawtucket Rings are designed for heavy duty, high speed performance—demand little attention and require no "breaking-in" period.

A trial installation, even on one frame, will show you why Pawtucket Rings give your travelers a "turn for the better".

PAWTUCKET SPINNING RING CO.

(Subsidiary of Saco-Lowell Shops)

CENTRAL FALLS, RHODE ISLAND

Vitritex finish

CUT OUT AND KEEP THIS INFORMATION FOR PERMANENT REFERENCE

This is number 4 of a series. Here you will find practical information of interest to users of rings

In preparing this table of Spinning Traveler Speeds the conditions such as would exist in the average well-managed mill have been assumed. Under some circumstances the speeds listed can be exceeded without creating any unfavorable conditions.

SPINNING TRAVELER SPEEDS

In feet per minute for the various spindle speeds and ring sizes

Size of Ring, Inches	Cir. in Inches	Cir. in Feet	Spindle Speed In Revolutions Per Minute												
			6000	6500	7000	7500	8000	8500	9000	9500	10000	10500	11000	11500	12000
			Traveler Speed In Feet Per Minute												
1¼	3 .9270	.3272	x	x	x	x	2617	2781	2944	3108	3272	3435	3599	3762	3926
1⅜	4 .3197	.3599	x	x	x	x	2879	3059	3239	3419	3599	3779	3958	4139	4318
1½	4 .7124	.3927	x	x	x	x	3141	3338	3534	3730	3927	4123	4319	4516	4712
1⅝	5 .1051	.4254	x	x	x	3190	3403	3615	3828	4041	4254	4466	4679	4892	5104
1⅝	5 .4978	.4582	x	x	x	3436	3665	3894	4123	4352	4582	4811	5040	5269	5498
1 9/16	5 .6941	.4745	x	x	x	3559	3796	4033	4270	4507	4745	4982	5219	5456	5694
1¾	5 .8905	.4908	x	x	x	3681	3926	4172	4417	4662	4908	5153	5399	5644	5889
1 11/16	6 .0868	.5072	x	x	x	3804	4057	4311	4564	4818	5072	5325	5579	5832	6086
2	6 .2832	.5236	x	x	3665	3927	4189	4450	4712	4974	5236	5497	5759	6021	x

Size of Ring, Inches	Cir. in Inches	Cir. in Feet	Spindle Speed In Revolutions Per Minute												
			6000	6500	7000	7500	8000	8500	9000	9500	10000	10500	11000	11500	12000
			Traveler Speed In Feet Per Minute												
2 1/16	6 .4795	.5399	x	3509	3779	4049	4319	4589	4859	5129	5399	5668	x	x	x
2⅛	6 .6759	.5563	x	3615	3894	4172	4450	4728	5006	5284	5563	5841	x	x	x
2 3/16	6 .8722	.5727	x	3722	4008	4295	4581	4868	5154	5441	5727	x	x	x	x
2¼	7 .0686	.5890	x	3829	4123	4418	4712	5006	5301	5595	x	x	x	x	x
2⅜	7 .4613	.6218	3730	4041	4352	4663	4974	5285	5596	x	x	x	x	x	x
2½	7 .8540	.6545	3927	4254	4581	4908	5236	5563	x	x	x	x	x	x	x
2⅝	8 .2467	.6872	4123	4467	4810	5154	5497	5841	x	x	x	x	x	x	x
2¾	8 .6350	.7196	4317	4677	5037	5397	5757	x	x	x	x	x	x	x	x
2 7/8	9 .0321	.7526	4515	4891	5268	5644	6020	x	x	x	x	x	x	x	x
3	9 .4248	.7854	4712	5105	5497	5891	x	x	x	x	x	x	x	x	x

WHITMAN Yarns

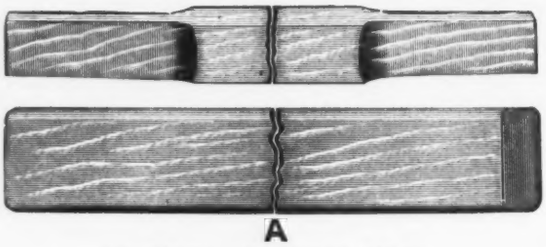
ARLINGTON MILLS
LAWRENCE, MASS.

CRAMERTON MILLS
CRAMERTON, N. C.

MONOMAC SPINNING CO.
LAWRENCE, MASS.

NONQUITT MILLS
NEW BEDFORD, MASS.

WILLIAM WHITMAN COMPANY, Inc.
NEW YORK BOSTON PHILADELPHIA CHARLOTTE



A
DYE STICKS

Since 1900 we have made high quality true-form oven-seasoned dye sticks for all standard machines. We can fill your needs today to meet any requirement. Write

FRANK BAILEY Cedar Brook, N. J.

RINSES . . EASILY AND COMPLETELY
DRUMMOND SOAP

- Rinses easily and completely.
- Saves scouring time and steam costs . . . Improves fulling and scouring operations.
- Gives the softest feel and better handle.
- Makes colors brighter.

OTHER HIGH GRADE "STANDARD" PRODUCTS
Stanso Palm Oil Curd Soap, Etc. Etc. Etc.

Standard Soap co. of camden
1918 South Sixth St.
Camden, New Jersey

Woonsocket, R. I., G. Tanguay, 281 Harris Ave.

taken over the Okev Hosiery Co.'s plant at 118 E. Kingston Avenue, Charlotte, and is manufacturing women's full-fashioned hosiery.

Julius Kayser & Co. report net profit for year ended June 30, 1940, of $334,544, compared with $759,029 in preceding fiscal year.

Lyerly Full-Fashioned Mill, Hickory, N. C., has installed additional equipment for production of Nylon hosiery.

M. & M. Hosiery Mill, Hickory, N. C., newly organized, with P. A. Mullins, manager, began operations the last of September, housed in a new building. C. T. Morrison and Mr. Mullins are the partners.

Marshall Hosiery Mills, Paducah, Ky., employes offered $905 for the assets of the defunct company, but the bid was declined by referee in bankruptcy Henry F. Turner, Jr.

Massachusetts Knitting Mills, Columbia, Tenn., have installed Reiner "Auto" heelers. The company has also installed the same type of equipment in the mill at Rochdale, Mass.

Maurice Hosiery Mills, Thomasville, N. C., have awarded contract to Miller Construction Co., Thomasville, for construction of two additions to present plant, one 30x60 ft, the other 30x70 ft; both of brick and steel construction.

Owen-Osborne, Inc. Gainesville, Ga., awarded contract for heating and sprinkler systems installations in the 64x300 ft. extension No. 2 to Crawford & Slaten Co., Atlanta, Ga. Henry B. McKoy Construction Co., of Greenville, have the general contract, and J. E. Sirrine & Co. are engineers. Cost of expansion program is $600,000.

Pitman Mfg. Co., Laconia, N. H., has been purchased by a group of Laconia men. Allied Industries, Inc., headed by T. D. Cheney, will control the plant, which comprises five buildings.

Ragan Knitting Co., Thomasville, N. C., has had its management returned to the organization by L. A. Martin, Lexington, N. C. attorney, who has discharged his duties as temporary receiver.

Red Stone Knitting Mill, Philadelphia, has been organized under the non-profit corporation law as a rehabilitation project with plant at 20 South 12th St.

Russell-Watkins Corp., Greensboro, N. C., men's half hose, is renovating the former Esther Hosiery Mill at Graham, N. C. and will move its entire operation there as soon as the work is completed.

Salem (Va.) Full-Fashioned Hosiery Mill has plans under way for a $65,000 machinery expansion.

Utica (N. Y.) Knitting Co. will erect a 54x37 ft. addition for boiler house and locker room to cost $33,000.

Van Raalte Co., Blue Ridge, Ga., hosiery division, has installed a number of Reiner "Auto" heelers.

Walton Knitting Mills, Hickory, N. C. are constructing an addition to provide space for new machinery in the expansion program.

Western Glove Works, Winnipeg, Man., is considering one-story addition to knitting mill, reported to cost over $40,000, with equipment.

Processing Plant News

Apponaug (R. I.) Co. reports net profit for year ended June 30, 1940 of $16,102 compared with $17,392 for previous fiscal year.

Arnold Print Works, North Adams, Mass., report net profit for year ended June 30, 1940, of $450,241, compared with $354,221 in previous fiscal year.

Cohoes (N. Y.) Dyeing & Finishing Co., lately chartered with capital of 200 shares of stock, no par value, has taken over former Emerson mill and will modernize and equip for dyeing and finishing rayons. Louis Weiss, previously connected with Sunbury (Pa.) Converting Works, is head.

Colonial Dyeing & Finishing Co., Ltd., Valleyfield, Que., recently formed as a Canadian subsidiary of Braendly Dye Works, Inc., Beacon, N. Y., has begun superstructure for new one-story mill, 25,000 sq. ft. of floor space, for which general contract recently was let to Carpenter & Co., Ltd., Montreal.

Fairlawn (N. J.) Finishing Co. has let general contract to Samworth-Hughes Co., Paterson, N. J., for one-story addition on Maple Ave., 60x200 ft., for expansion in dyeing and printing departments.

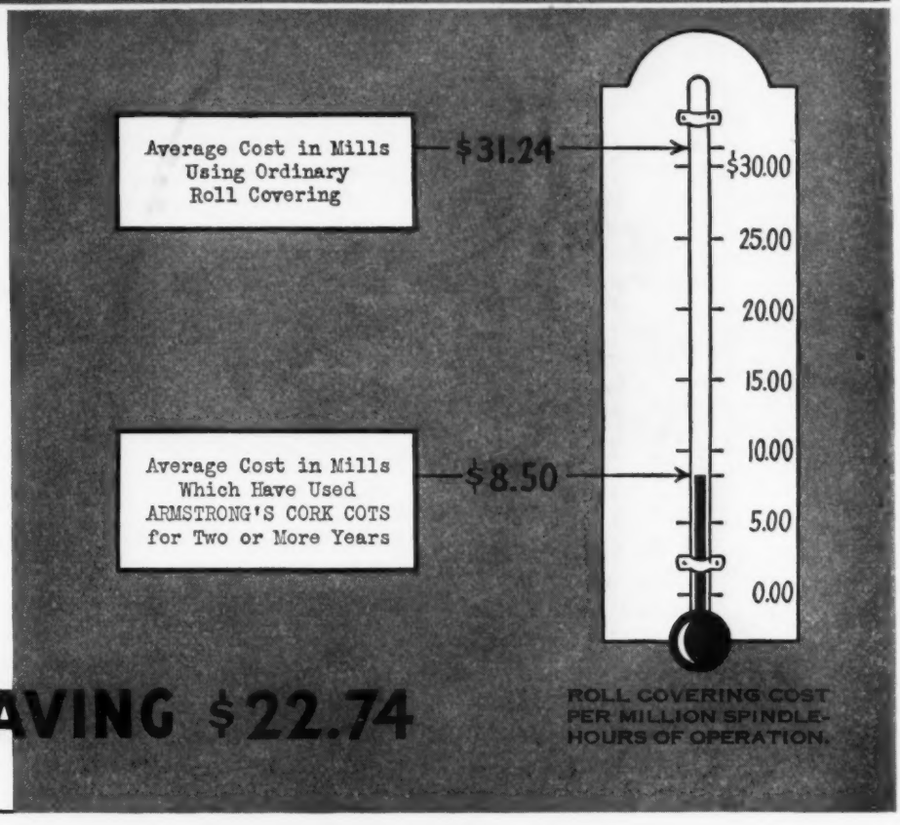
National Dyeing & Printing Co. is planning resumption of operations at the Williamsport, Pa., plant, early in October. The plant, idle for several years, formerly employed 350 workers.

Ramapo Finishing Corp., Sloatsburg, N. Y., in a bankruptcy reorganization, is being operated by a committee of creditors and is planning to borrow $25,000 to carry on the business.

ADVERTISING PAGES REMOVED

WHY MILLS TURN TO *Cork* FOR ECONOMY

HERE'S PROOF—from Mills Spinning *Medium Numbers*—of the economy of Armstrong's Cork Cots. (This advertisement is Number Three of a series showing savings of mills spinning different ranges of numbers on cork cots.)



AVERAGE SAVING $22.74

AND HERE'S A BREAKDOWN of actual roll covering costs as reported by representative mills which have been using Seamless Cork Cots for two or more years:

Mill	No. of Spindles	Numbers Spun	Cost per Million Spindle Hours of Operation	Type Frames
A	70.5M	8s - 26s	$9.89	Long Draft
B	30M	10s - 26s	9.59	Long Draft
C	16M	10s - 30s	9.25	Long Draft
D	17M	20s - 22s	5.25	Long Draft

HERE are facts in dollars and cents . . . proof of the cash savings so many mills enjoy by using Armstrong's Cork Cots.

The initial cost of these cots is no higher than that of ordinary roll coverings, and they're quicker and cheaper to assemble. Armstrong's Cork Cots are longer wearing, too; in addition, they can be rebuffed—at a cost of about ½¢ a roll per rebuffing—three or four times!

Furthermore, you can spin ***better yarn*** on these cots—for their higher coefficient of friction assures a stronger, more uniform product. Running of the work is also improved. You get less eyebrowing and end breakage, less clearer waste, and fewer top roll laps. From every standpoint, cork gives better service.

An Armstrong representative will be glad to show you production figures of mills spinning your range of numbers on cork cots. And he'll show you how ***you*** can enjoy worth while savings on roll covering costs. Armstrong Cork Company, Industrial Division, Textile Products Section, 927 Arch St., Lancaster, Pennsylvania.

ARMSTRONG'S *Extra Cushion* SEAMLESS CORK COTS

CORK PRODUCTS SINCE 1860

ADVERTISING PAGES REMOVED

Full Speed with Caution

Comments by Henry G. Lord

A few days ago I was talking to a wise and successful manufacturer. He agreed with my comment last month that the textile industry does not require more than the normal amount of money put into new buildings, to meet the present emergency, but that it should make every effort to increase the efficiency of its present plants by better management, lower costs and above all, by modernizing equipment and processes and creating the best possible labor relations to insure highest production.

In my long connection with the textile industry, I have found that textile mills buy machinery and equipment when they are making money, and many of them hate to get rid of the out-dated machinery if it is in good condition and can be operated profitably in a bull market. So they build another mill or an addition to house the new equipment. Expansions plus extra working shifts result in overcapacity, ruthless competition, prices shot to pieces, and then another period of depression in textiles. I have seen this happen at least six times. We all know what the past ten years have been like.

In this boom that we are now experiencing, we must guard against the post-emergency period. If we don't act wisely now, a collapse is inevitable.

Modernize to the very limit of plant capacity first, and stick to two shifts or even three shifts if necessary to meet temporary pressure. If new construction is necessary to meet the Government's war defense needs of the moment, such additions should be financed by the Government under similar conditions as for other national defense projects, and when the emergency is over, taken out of production for normal consumer demand unless needed.

Hold the standard consumer markets by keeping prices down; don't slacken up on your sales and promotion activities, and if you make style fabrics, keep on styling better than ever.

During the past ten years, textile mill construction has held a remarkably steady level, according to F. W. Dodge reports, never rising above seven percent or falling below five percent of total industrial building. If this stability is maintained, there won't be so much tribulation in the years to come.

Meantime take advantage of the present opportunity to modernize to produce the most, the best and the lowest cost production your present plant is capable of—and this present issue of Textile World is designed to be helpful in that respect.

And one more thing before I stop preaching. This is written a week before election; I hope and believe that my candidate will be elected; I think business, as well as a good many other things, will be better if he is, but whoever is to be our next President, let us all avoid a defeatist attitude but during the next four years present a united, determined industrial front for national defense and the problems coming after. Remember, it was industrialists and not politicians who made America great, and can make it greater.

HENRY G. LORD, *founder of Textile World in 1888 and president, Bragdon, Lord & Nagle Division, McGraw-Hill Publishing Co.*